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RURAL INDUSTRIES
IN THE
AUSTRALIAN ECONOMY

RURAL INDUSTRIES IN THE AUSTRALIAN ECONOMY

by

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Preface

THIS book finds its genesis in the bewildering pattern of Australian economic events extending from the early thirties to the post-war boom years. I have long felt that there has been a need for a study interpreting the economic changes in recent decades, and this work has grown out of the varying conditions I have noticed while growing up on the land in Australia. Questions such as the causal factors to rapidly changing rural prices, the effects of government policies like tariffs and marketing, the reasons for the remarkable shifts in both the wages and availability of rural labour have all been frequently asked, but very infrequently satisfactorily explained. I hope that this study will help to answer questions of this nature, and through clarifying the problems facing rural Australia, in many respects may act as a guide to policies most helpful in facing future economic changes.

It is extremely difficult to acknowledge adequately the debt I owe the many people whose help and advice have made this work possible. The research for this book was undertaken at the Agricultural Economics Research Institute, Oxford University, and I am grateful to all the Institute staff for their advice and interest. Apart from my family, I am particularly indebted to the late Professor A. W. Ashby and Mr Colin Clark. Professor Ashby, when Director of the Institute, was most helpful when this work was at the planning stage. Mr Clark, through his specialized knowledge of Australian conditions and sympathy with the problems I sought to solve, helped me to get at the core of the economic factors involved. In fact his continued reading of the manuscript in its various stages of development and many hours of discussion on the subject in no small way enabled me to reach a point where general conclusions were possible. At the same time, however, it would be unfair to Mr Clark to suggest that he is responsible for the reasoning and conclusions within this book.

IAN SHANNON.

University of Melbourne,
May 1955.

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PART I

The Australian Rural Scene

CHAPTER 1

The Growth and Purpose of Australian Rural Production

IN Australia the size of the national income has always depended upon the economic conditions within the rural industries. In addition to supplying practically all the food requirements of the population, through the export of rural staples Australia has become an important trading nation receiving capital goods and general manufactured articles from abroad. In earning overseas currency to pay for imports, the rural industries have been at the corner-stone of economic development, for practically all import requirements have been purchased by the productivity of the land.

On examining Australian economic expansion from an historical angle the extreme importance of the rural industries can readily be seen. Not only have booms and depressions been conditioned by pastoral and agricultural prices, but seasonal conditions, through influencing the quantity grown and exported, have also been a barometer to national income and economic growth.

During the years immediately following the first settlement at Sydney in 1788, the challenge of rural production expressed itself as a means of survival since the dependence on a twelve thousand mile supply route covered by sailing ships frequently precipitated acute food scarcity in the tiny colony. By selecting more suitable land further away from Sydney after crops had failed when sown close at hand, however, many of the difficulties associated with growing food locally became less pressing and attention was directed towards producing goods for export. This policy of export production—which after a few years helped to found the wool industry—was pursued for two reasons. In the first place, parliament in London gave its blessing to the founding of New South Wales on the assumption that it would be a paying proposition besides being a penal colony. Secondly, the official attitude of killing two birds with one stone admirably suited the rapidly expanding English industrial fabric, for with the Industrial Revolution under way, raw materials were in keen demand.

Yet the earliest exports were not particularly successful. Flax, timber and coal were exported in the closing years of the eighteenth century but failed as a paying proposition because of the long sea voyage and readily available supplies of the same goods in Europe. The products of sealing and whaling sold much more readily and by 1800 were the most important exports; in fact, the enterprise failed through high profits which led to the unrestrained slaughter of all the seals and whales around the Australian coast.

Although attempts were made to export other products, by 1820 it was generally agreed that wool offered the colony greater opportunities than any alternative. Not only was the demand for wool increasing in proportion to the rapid growth of the British textile industry, but having little weight in relation to value it readily bore the cost of a long sea voyage, while the sheep themselves could be grown extensively with little labour on semi-cleared land. These possibilities were foreseen as early as four years after the original settlement by John Macarthur, who introduced a merino strain excellently suited to the Australian environment. So, following the discovery of a way through the Blue Mountains in 1813, sheep numbers multiplied quickly on long well-watered plains of the interior.

In fact, sheep growing expanded so rapidly in New South Wales in the early period of the nineteenth century that succeeding governors experienced great difficulties in curbing the power and rule of the squatter kings who frequently tended to take the law into their own hands.

In the 1850's, however, after the pastoral society had opened up huge tracts of land and largely won the day against official and penal colony interests, extensive gold discoveries diverted political attention to new problems, and, after a while, shifted economic growth on to a broader and more balanced plane. With the lure of easy wealth to be won from gold, labour left farm and station to go to the mines, and immigrants arrived in thousands from overseas; indeed, the attraction of fabulous wealth proved so inviting that in the ten years to 1860 the Australian population increased threefold and left in its wake problems of food production with little farm labour.

Until the time when the gold rushes evoked an explosive increase in the Australian population, wheat growing tended to stagnate under the weight of poor organization and primitive methods. The challenge of labour scarcity on farms was largely

solved by the invention and introduction of a stump-jump plough and a harvesting machine (Ridley's Stripper), both of which were ideally suited to Australian conditions: the problem of feeding the many extra hungry mouths was overcome when new land, more suitable than that previously cultivated, was opened up in the Colony of South Australia which had been founded a few years previously. When, at a later stage, improved wheat strains of a type more suited to the climate were introduced and superphosphate fertilizer developed, both the total production and yield per acre expanded to put the wheat industry on a sound export basis.

The collapse of the gold boom with the exhaustion of many fields again changed the temper and direction of productive expansion: instead of serious labour shortages came the blast of unemployment and demands for land or jobs in commercial activities. Governmental policy—which was still bent on reducing the power of squatter kings—inclined towards settling surplus labour as farmers on selected areas of graziers' lease-hold sheep stations. Although this system of land settlement led to a rather vicious conflict between squatters and selectors, except perhaps for the continued social distinctions between sheep-men and wheat-men, its aftermath left little long-term effect compared with the policy of protection canvassed in Victoria.

David Syme, proprietor of a Melbourne paper, the *Age*, saw in a protectionist state an opportunity of expanding industry and employing redundant labour from extinct gold fields, and largely through his untiring efforts Victoria adopted a tariff in 1866. Although other colonies remained anti-protectionist, with the creation of the Commonwealth in 1900, the free trade sympathies of the landed interests were politically impotent against the constant onslaught of the Victorian ideal, and Australia adopted a tariff policy as an accepted reality in the relatively short period of eight years after federation.

Actually, but for the rapid growth of a parliamentary labour party, it is unlikely that protection would so readily have become a constant aspect of the commercial landscape and a political dead letter. During the 1890's low export prices and dwindling external loans contributed to an unfortunate series of harsh strikes and lockouts. In essentials the struggle centred around claims for freedom of contract by employers and a demand for collective bargaining on behalf of the workers, and although the latter lost the battle, the unrest gave great impetus to the growth of organized trade unions.

The strong labour movement which sprang up overflowed into the Commonwealth political arena with federation, and the protectionist case was assured following an uneasy alliance between commerce and labour to extend and strengthen the doctrine of a high tariff wall.

In the second half of the nineteenth century, however, protection policy was more of a subject for political and intellectual debate than an accepted means of changing the productive pattern of Australia. During this period the healthy foundations of a young country's growth commenced by wool growing and mineral discoveries were consolidated and extended. With constant experimentation wheat growing became more suitably adapted to dry farming techniques; beef and fat lamb production expanded in importance when the invention of refrigeration in the 1880's initiated opportunities of meat sales abroad. Since land became relatively more scarce farming practices were intensified in many regions, as, for example, with fruit and vine culture which grew following the spread of irrigation and settlement in higher rainfall areas. Meanwhile greater internal consumer demand absorbed the larger portion of production increases, for population rose from an estimated 400,000 in 1850 to over four million by 1905.

In many respects the economic importance of John Macarthur's faith in merino wool and the gold rushes can be matched by the 1914-18 War, for it lies at the pivot between a simple trading society and a more mature economy. As is well-known, imports from traditional overseas suppliers were cut off, and exports—especially wool—supplied the Allies with essential raw materials. Commercial activity changed in the direction of increasing industrialization at home and schemes were introduced to control the marketing and price of the chief export staples; and in general these ideals have continued to exert a strong influence on Australian political thought.

With post-war popular opinion supporting a policy of economic nationalism, a new tariff in 1920 introduced a system of high protection. Existing import duties were increased substantially and the protective coverage spread much wider to include basic industries like steel which had grown up during the war. But the effects of any tariff-induced increment in production costs were not immediately felt by those industries dependent upon selling abroad; export prices were high, and in combination with an immigration rate at a record for the century, the resulting increase

in demand gave incentive to expansion in all branches of economic activity.

During the twenties many schemes were introduced to extend the range of rural production. Financial assistance in various forms was either stepped up or granted towards the production of sugar, wine, meat, tobacco and rice, etc. Meanwhile total output was raised through the subdivision of large estates, the construction of irrigation works and railways, and, with advances in farming techniques, the opening up of new land as the margin of cultivation shifted back. Although some of these schemes increased the scope of profitable enterprise, it is easy to see thirty years after the event that many mistakes were made. For example, as shown in Chapter 3, wheat farmers moved beyond the marginal fringe; dried fruits grown on new irrigation blocks could not compete in price on the British market against similar goods grown in the Mediterranean; the price paid for land used in subdivision was too high and the blocks themselves too small.

The general upward trend in production and consumption levelled off in 1927 and ceased in 1928, for even before the crash in 1929 prices of goods entering the export market began to fall and farming became progressively less profitable. The situation deteriorated early in 1929 with a heavy fall in wheat and wool prices on world markets, and when over 80% of a loan floated in London was left in the underwriter's hands, opportunities of covering imports through overseas borrowing abruptly ceased. At the same time, as import prices fell less and more slowly,[1] and because the volume imported was slow in reflecting the depressed internal conditions, the balance of payments fell into serious deficit. Following in the wake of decreased export incomes and curtailed overseas investment, purchases of goods and services were violently curtailed in Australia, causing unemployment. Since the unemployed spent much less they threw others out of work, introducing a spiral restriction of demand and hastening the march into deep depression.

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[1] Index of Import/Export Prices:

Year	*Imports*	*Exports*
1926/27	100	100
1927/28	93	107
1928/29	90	99
1929/30	90	77
1930/31	82	57

Source: Wallace Bruce Report, 1932.

The Scullin Government made a futile attempt to close the trade gap by growing more wheat, and as it considered Australian unemployment resulted from an excessive volume of imports and immigrants, took steps to stop both. In 1930, the Commonwealth Treasurer, Mr E. G. Theodore, (of all Australian politicians—or economists—the most far-sighted at the time) introduced two bills to raise effective demand, but as any inflationary measures were against the spirit of the period, both bills were rejected by the Senate. On the invitation of Mr Scullin, Sir Otto Niemeyer (an adviser to the Bank of England) arrived in July 1930 to cure the depression; he suggested, and the various governments undertook to balance their respective budgets, that overseas borrowing should cease and that the volume of public works be contracted. Against Sir Otto's advice a free exchange rate was introduced later in the year through the instigation of the Bank of New South Wales and in December 1931 the rate was pegged at the present figure of £A125 to £stg100. Alternative plans included a policy of debt repudiation by the Premier of New South Wales, Mr J. T. Lang, and a project instituted by Mr Theodore of reduced interest rates, expanded bank credit and increased public works. Unfortunately, the latter plan was rejected by the Senate and the banks.

In the end the so-called Premier's Plan was adopted in 1931. Its main provisions included a reduction in wages, salaries, pensions, rents and interest on government bonds of approximately 20%; increased taxation; and lower interest rates on deposits and advances.

Still, all this was before Keynes' *General Theory* exploded upon a traditional society: in the present light of our simple knowledge that to maintain employment demand must remain effective, it is obvious that most of the schemes were severely out of line with prevailing economic conditions. Unemployment increased after the adoption of the Premier's Plan, reaching a high of 30% in the second quarter of 1932; and indeed recovery only began when confidence and demand expanded with a rise in export prices. However, as the Commonwealth and State Governments were committed to policies including balanced budgets and strict economy all through the thirties, even at the outbreak of war in September 1939, 10% of the workers were unemployed.

Imperial Preference and the growth of financial assistance to rural producers were expanded, clarified and strengthened in the depression decade; and over the years these have influenced both the profitability of rural enterprise and the output of various

products one against the other. Although the United Kingdom gave Australia a measure of protection for exports such as fruit, sugar and wine after 1919, these items covered only a small portion of total Australian overseas sales; and it was not until 1932 that preference was recognized in a codified form as Empire policy. Domestic financial assistance in one way or another was granted or extended to practically all production except wool, and this in conjunction with Imperial Preference helped expand output in many smaller rural industries.

After the outbreak of the Second World War many of the economic problems associated with the depression years were quickly solved or replaced by others of an opposite nature. Unemployment became much less pressing following opportunities of working in munition factories or joining the armed forces, and many people moved out of agricultural and pastoral production. Between 1939 and 1942 the number of male persons permanently engaged on rural holdings declined 20% and this exodus largely resulted from two influences. In the first place, many people on the land vividly remembered the heart-breaking conditions of the depression years and were glad of a chance to escape from it all. Then secondly, except for wool, most rural production was burdened with continuing surpluses and a shortage of shipping, so the future looked much brighter in the rapidly-expanding secondary industries.

But the entire aspect of rural production was radically changed when Japan entered the war: in most cases chronic surpluses gave way to grave deficiencies as supply lines shifted to the Pacific and population in Australia increased with the arrival of Allied servicemen. The availability of wool and wheat was not severely affected except for greater shipping difficulties, but following shortages in manpower and fertilizer combined with new and varied tastes, supplies of vegetables, meat and dairy produce became increasingly scarce. Although the situation demanded skilled planning this was rarely achieved, for not only was food policy directed by two Commonwealth departments (Commerce and Supply) until 1943, but production was in the hands of the States. The galaxy of sub-departments and sectional interests frustrated co-ordinated planning and: "In particular, the division of responsibility between the Commonwealth and the States continually forced food administration into the political arena, with the result that every civilian shortage, every organizational imperfection, and every unpopular decision were exposed to the full

glare of publicity, and were made the butt of criticism by interested parties."[2]

Although latter policy was to divert manpower from industry and the forces to agriculture, with over-full employment the labour problem remained a limiting factor to expanded output while continued shortages of machinery and fertilizer aggravated the situation. Above and beyond all this, price control of many rural products restricted the competitive position of the farmer, and in combination with increasingly less efficient resources, rural production became more arduous and exasperating as the war progressed. As a result, with the aid of a terrible drought in 1943 and 1944, output of crop and animal products tumbled.

Farmers and graziers expected improved conditions in the immediate post-war years but the position remained difficult. Many returned servicemen showed no disposition to return to rural life, and with government policy directed towards an expansion of secondary industry, materials as well as labour remained scarce. Actually, in the post-war era: "The remarkable fact is not that agricultural production did not increase particularly fast, but rather that it increased at all."[3]

Since the war the Australian economy has been influenced by remarkable, unexpected, and uncontrolled changes. Over the last few years the demand for goods and services has moved forward in gigantic strides owing to an inflation of spending power following fantastic wool prices, a policy of mass immigration and huge development schemes. In the earlier post-war era, because supplies were not available from overseas or the dollar shortage restricted the area of purchase, many commodities remained just as difficult to import as during hostilities and the increased spending power—which received a considerable injection from servicemen's deferred pay and gratuities—became concentrated on scarce Australian-produced wares. Now, since an expansion of total productive capacity is limited by a shortage of extra workers once full employment is reached,[4] domestic supply during recent years has been unable in many instances to increase in proportion to monetary demand; so, following relaxations in rationing and

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[2] E. Ronald Walker: *The Australian Economy in War and Reconstruction*, Oxford University Press, 1947, p. 188.

[3] S. M. Wadham: "Trends in Australian Primary Production", in *Australian Production at the Crossroads*, Angus and Robertson, Sydney, 1952, p. 29.

[4] The introduction of a forty hour week soon after the war was a grave *economic* error for it reduced Australian productive capacity.

price control,[5] prices have risen to equate new higher demand with relatively constant supply.

At the same time, because the basic wage system fixes minimum pay in real terms, increasing prices have sent wages soaring by at least an equivalent amount; and as rising wages produce another money demand increase, prices have followed suit to send up wages again.[6] Thus the spiral of inflation has turned, and the race between rising prices and wages has only been braked because some demand from inflated pay envelopes has leaked away in taxation, savings, imports and the like.

Largely as a result of government policy and inflation, the trend towards a greater diversification of rural production achieved at such great cost in the inter-war years, has unfortunately contracted. Because practically all agricultural and pastoral products except wool have been kept at artificially low price levels on the domestic market or exported at contract rates, the profitability from investment in most rural enterprise has declined relative to secondary and tertiary pursuits. The table on the following page shows that wool has been the only product where prices have kept well ahead of costs in recent years, and since the individual or corporation with money to invest tends to seek a line of production showing the highest profit consistent with risk factors, capital investment in many branches of rural enterprise has been insufficient to raise output in proportion to population increases.

The strains on the domestic economy in the last decade have also caused considerable changes in international liquidity. Although the balance of payments was in a strong position in the last years of hostilities and early in the post-war period, largely as a result of two influences Australia has recently shown a marked propensity to be in constant deficit. In the first place, as shown in Figure 4 on page 82, the margin of any increment in national income used for purchasing imports rises rapidly after full employment. Therefore, in the last few years, there has been a tendency to spend an increasingly greater percentage of the national income overseas. Then secondly, the real effectiveness of tariff protection has become much less marked following greater relative rises in the price of domestically produced goods to imported alternatives.[7]

[5] Price control retained on some essentials; thus productive resources shifted to regions of greatest profit—in non-essential activities.

[6] Basic wage in Sydney more than doubled in five years after November 1946.

[7] Australian wholesale prices (for basic materials) rose 123% in the seven years ending 1953/54. In the same period import price index rose 63%.

RATIO OF PRICES RECEIVED FOR VARIOUS PRODUCTS SOLD TO PRICES PAID FOR ALL ITEMS: N.S.W.

Base, 1945/46 = 100

Produce	1946/47	1947/48	1948/49	1949/50	1950/51
Wool	153	227	253	304	542
Wheat	155	138	188	144	133
Vegetables	78	76	90	95	99
Meats	109	108	114	121	122
Eggs	98	107	115	119	115
Fruit and sugar	97	80	63	75	70
Dairy produce	97	98	96	95	88
Weighted average	128	147	165	177	250
Weighted average (excluding wool)	116	109	124	116	110
Weighted average (excluding wool and wheat) ...	101	98	99	105	101

Source: Bureau of Agricultural Economics.

Note: Aggregate price: cost indexes are not directly comparable, for in as much as expenditures by producers of different products vary, there is a margin of error in direct product index comparison. However, as costs have moved together and allowing for input substitution, the margin of error should not be great.

By 1950/51 the value of imports was seven times the immediate pre-war average, and although this was desirable in as much as it drew off inflationary pressure, with a sharp fall in wool prices of 50% in the latter part of 1951, international reserves fell rapidly. In March 1952 it was necessary to impose severe import restrictions to enable London Funds to remain at levels consistent with continuing overseas payments and precautionary measures. This method of keeping the balance of payments in order is very undesirable, for as we shall see in succeeding chapters, quantitative restrictions do not mitigate the malady but increase it.

In contemporary Australia, with all political parties committed to full employment and growing domestic confidence in manufacturing investment behind an import restriction wall, an unstable economic equilibrium which depends acutely on high wool prices for continued success is in the process of rapid evolution. Unless government action is taken to reverse this trend, adjustment following a collapse in wool prices is likely to be difficult, prolonged, and severe.

In fact, government policy plays a tremendous part in influencing the pattern and direction of economic growth, and one of our purposes will be to discuss various official policies in relation

to their impact upon the volume of production in the various segments of the economy. Within the short historical analysis in this chapter we have seen how the attitude of political opinion and governmental action expressed itself on the productive pattern whether the occasion was associated, for example, with the first settlement, the gold rushes and their aftermath, or related to the depression and the last war.

If Australia had been developed under truly *laissez-faire* conditions we may safely assume—in relation to present day productive capacity—that secondary enterprise would be much less advanced and the volume of primary production would be greater. Although the existing balance between primary and secondary industries is a more desirable blend than the alternative associated with *laissez-faire*, government policy should be carefully geared to allow both sides of the domestic economy to advance together. For instance, since a protection policy increases the profits in secondary pursuits and lowers profits in industries dependent upon export prices (through increased internal costs), if the tariff wall is too high, manufacturing will expand at the expense of rural production. Since most rural industries in Australia have a greater real productivity than practically all manufacturing (if this were not the case there would be no need for general protection), should tariff ideals be pushed too far, the real national income must fall. In fact, over the one hundred and fifty odd years of settlement, national income has been maximized by exporting goods (rural products) to cover payment of those imports whose real costs of production in Australia are excessive.

However, it may be stated in passing that this may not always be so. The future is dim and unpredictable: deposits of mineral resources may be discovered; new revolutionary productive techniques may be introduced; or even alternatively, expanding population and the reorganization of industry may, in time, shift the balance of real productivity on to the side of non-rural activities. All the same this is only a conjecture and in the absence of any concrete knowledge of future trends, present truths are a better guide to any eventual situation than romantic ideals or Utopian visions. Nevertheless it is necessary to consider two points in relation to Australia's future expansion; the recent discoveries of oil and uranium have led to hopes for a rapid expansion of cheap manufacturing activity in the economy, and though this may not happen, a large part of the continuing pressure on the balance of payments could perhaps be assuaged.

The discovery of uranium in Australia at the dawn of the atomic era has produced considerable interest in its use as an alternative means of power and energy. Since energy from atomic fission is unlikely to be cheaper than that available from present day sources, it is doubtful whether any immediate benefit to the cost structure of Australian industry could result. Even if this should be so the effects on the balance of payments may well be rather different. If the total amount is large enough, a healthy export trade may eventuate, which could well be the fairy godmother of Australian international solvency, but as the quantity available and prices obtainable are veiled in secrecy, it is impossible to state categorically the eventual position. All the same, if Australian deposits are a large portion of world deposits (the available information suggests this is not so), and if the great powers do not use atomic warfare to exterminate each other, then some of our conclusions in the latter part of this book could demand re-appraisal. On the other hand, it is impossible to make concrete assertions without factual information and we will not consider the influence of uranium discoveries in this work.

The recent discovery of another fuel, oil, opens the possibilities for a new field of expansion in Australia. If the oil finds are sufficient to supply Australia's own needs, the immediate benefit will result from a substitution of domestic production for imported petroleum products. In other words, Australia could save about £A100,000,000 yearly on imports (the cost of present petroleum imports), and overseas currency earned from exports could instead cover some other imports. Or alternatively, expressed in a slightly different manner, the need to increase the volume of exports would not be so pressing, as the demand for imports would not be so consistent. Oil imports are only one tenth of total imports, however, and in a world where the price of Australian exports may change both profoundly and quickly, if the balance of payments is to be kept in order with the changing pattern of world prices without import restrictions and the like, the volume of exports and international reserves must remain as high as possible. Of course, sufficient oil may be produced domestically to enable Australia to become an exporter, but at the time of writing the odds against this type of gamble appear, to say the least, rather long.

In relation to Australian industry, as there is no apparent reason to expect the price of Australian oil to be cheaper than imported oil (c.i.f. price), there is little source for speculation about a

declining domestic cost structure. Because the Western Australian oil discoveries were made by an international monopoly, the price in Australia will be set by an overseas firm at a rate which will maximize profits. It may be safely assumed that this will be just below the Australian c.i.f. import price. All the same this is only surmise; there may be no large scale finds, and in any case, it is unlikely that Australia could become an oil exporter in the foreseeable future.

Therefore we can conclude that Australia will depend upon rural products to finance overseas payments unless uranium finds are considerable and extremely valuable. In the long run, with an expanded population and a sensible growth of manufacturing, costs may come down through larger scale production and a broader pattern of production to mitigate the dependence on imports.

However, this is concerned with very long-term developments; we shall find, as we proceed, that to allow Australia to achieve a largely self-supporting position in the long run, rural production must be increased in the shorter period. The growth of manufacturing is a desirable aim; we will not be concerned with that

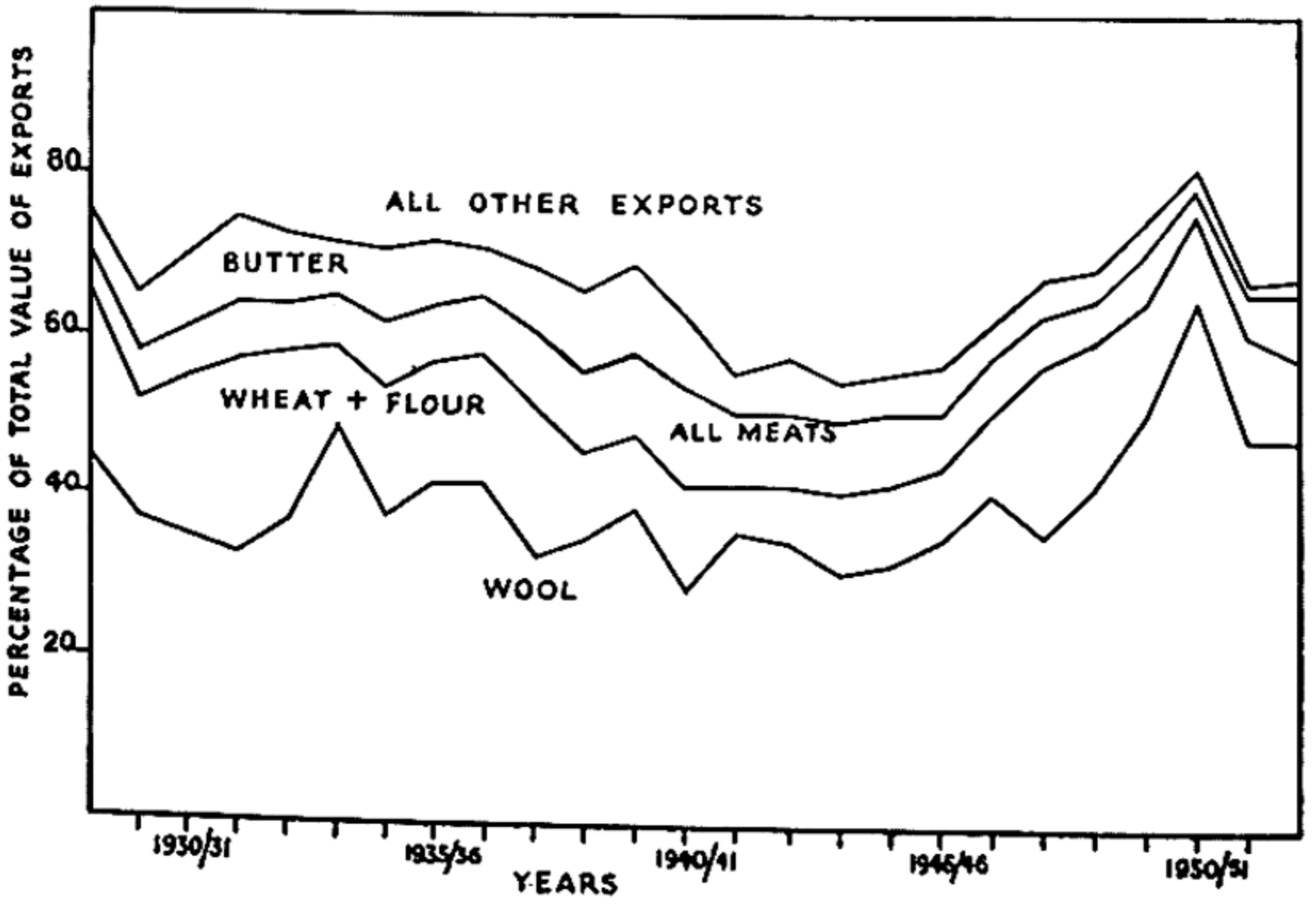

FIGURE 1

COMPOSITION OF AUSTRALIAN EXPORTS: ACCORDING TO PERCENTAGE VALUE OF SEVERAL PRODUCTS.

aspect in this book. Our contention will instead be to question the method and rate at which this expansion has taken, and is taking, place.

The chart on the previous page shows the general composition of Australian exports. Since wool, wheat (and flour), meat and butter have been of major importance in determining the total Australian export income, we will consider each of these industries in the remainder of Part I. Through our inquiry in the next four chapters we should be in a position to gauge the effects of government policy, and by dint of this exposition, be able to determine how a general economic policy may affect various enterprises in different ways. Traditional literature on this subject considers the export industry as a single unit, and suggests that all induced changes in the export or rural industry work in the same direction. One of the more important aspects of this work will be to throw a measure of doubt upon this generalization.

Exports other than rural products are of little importance in relation to the total value of goods sold overseas. The most important products in this category are from the primary extractive industries, and in recent years exports of silver, lead and zinc have been around 40% of the total value of non-rural exports. Although we shall make little or no reference to these exports this is not to disparage their importance but only to keep this work within finite length. Actually, with growing short-term uncertainties concerning food exports and the doubtful long-term future for wool, non-rural exports are of growing importance. Since most of these products are primary extractive raw materials and compete against similar exports from other nations, it will be apparent from our analysis in Part II that the general effects of government policy are analogous to those on rural industries expending high proportions of labour and capital costs to total costs. In Australia, as a generalization, we may say that the consequences of government policy act in a similar direction on non-rural primary exports (other than uranium) and rural exports apart from wool.

CHAPTER 2

The Wool Industry

THE production, manufacture and use of wool is comparable with only one other branch of economic activity, for as the wool trade is essentially associated with the removal of protective covering from sheep to supply a form of clothing for man, the wool and fur trades are alone in having these fundamental similarities. Although this shifting of coats from beast to man is as old as human life itself, certain aspects of this type of activity evoke unique differences compared with most other rural production. Moreover, as Australian wool exports over the years have been about 40% of the value of all exports, it should be particularly profitable to consider the factors which influence both the supply and demand and thus determine the price of raw wool. Through an appreciation of these characteristics we can form a foundation more consistent with reality than many, on which to base our considerations of government policy.

Pure raw wool is a generic term referring to the fleece of sheep, but as the sheep themselves and the climate in which they live may vary considerably, wool is of very many types. For general purposes raw wool may be broadly classified into merino, crossbred and carpet grades, although in actuality there may be abundant variations within each as well as overlapping at the margin of substitution between the grades themselves. In the British market wool is usually graded and typed according to the fineness of crimp: in this case 60's quality and above are merino; 40's to 58's are crossbred, and anything below 40's is carpet. Although this gives a good first approximation, many other factors have to be taken into account to determine the value and use of a particular lot of wool. These alternative aspects for consideration include the strength of the raw wool fibre, its uniformity and diameter, handle or feel, surface structure, colour and crimp. Some of these characteristics may be correlated, but there is great variation with sheep breeds (also within a breed, and indeed, on a single sheep) and environment; and this in turn raised difficulties in selling as a standardized type or lot. For example, when wool was purchased by the British Government

under appraisal in Australia during the Second World War, there were 1,500 classified types. As a result it is impossible to sell raw wool in large amounts by specification or sample, and those who suggest the present methods of sale should be abandoned do not take into consideration the peculiar nature of the wool fibre itself.

For sale in Australia and most other large producing countries wool is displayed in various lots (which have been classed by growers to be fairly even types) by selling brokers in their stores. The selling brokers work as commissioned agents for the wool growers, and wool buyers, who are specialists in their occupation, act as agents for different woollen mills and seek the type of wool demanded by their clients at the lowest possible price. After inspecting and pricing the various lines of wool displayed in the selling brokers' stores, the wool itself is sold at auction sales by the wool-selling interests to the buyer who offers the highest price.

The method of selling wool is important; for not only has it been under attack in recent years from certain quarters, but it has, as we shall see in Part II, an important influence in determining wool price changes following variations in Australian exchange rates. In regard to the peculiar nature of raw wool, however, auction sales have many advantages, and if any changes are warranted they are within the present system of marketing and not towards a substitution to some alternative.

Each type of raw wool has an optimum use for a particular manufacturing process and the fabrication of a well defined class of products; and as the value of the merchandise within the various product groups is usually at variance, so is the price of the different types of raw wool used. Raw wool is utilized in making many wares, but we may classify the whole manufacturing aspect into four distinct functions. Firstly, there is the worsted process which is associated with the production of textiles suitable for suits and coats. The completed worsted product is the most valuable of all woollen goods, and finer merino wools which are the most suitable raw materials command a relatively high price. Secondly, there is the woollen process, the product of which is used for hosiery and knitting garments, and raw wools used in making this type of manufacture include crossbreds, strong merino and worsted trade rejects. Usually the price of raw wool most suitable for woollen production commands a lesser amount than that used in worsted manufacture. Crossbred wool, which is important in the woollen process, is a by-product of meat sheep; so variations in mutton and lamb prices may cause

the supply and price of crossbred wool to change. Moreover, as some woollen process yarns are often used in worsted manufacture and, because woollen and worsted products compete with each other on the apparel market, changes in the numbers of crossbred meat sheep may cause variations in the price of merino wool.

Wool is also absorbed in felt making and industrial purposes. But these activities usually employ inferior wools. As 80% of the Australian wool clip is suitable for apparel manufacture, wool utilized in these two latter processes is of much less importance. In felt manufacture strong wools are used, and the products of this category include floor and industrial felts, carpets, hats and caps. Industrial activities absorb the most inferior wool types for diverse purposes like filter manufacture and furniture padding.

The price spreads between various wools used in the above four manufacturing processes are not static but change with varying economic and other conditions. For example, following increased real income beyond a certain point, consumer demand for woollen clothing goods shows more elasticity than for blankets, carpets and the like; for with the latter, when the purchaser has sufficient he is apt to be satisfied for a considerable period. With a further expansion of real income worsted clothing has greater utility than woollen, so the demand for worsted products increases relatively. Since each type of wool has an optimum use within a certain manufacturing process and, as the price spread between the products of each process may vary following changing consumer demand, the money spreads between the raw wool types change with shifting levels of real income if other things remain the same.[1]

Unlike many staple foodstuffs such as wheat, the quantity of woollen goods[2] consumed shows considerable variation with changes in real national income and between different income groups. In fact, many of the studies on this subject show the income elasticity of demand[3] for woollen clothing as being greater than unity, so with a given increase in income, the use of woollen

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[1] As wool is sold on a world market "other things" probably never remain the same: thus even though money spreads between better and inferior wools may expand with increased world real income, the percentage spread may do otherwise. If increased world real income is confined to "underdeveloped" countries, then demand for inferior wools will probably expand relative to the better types.

[2] Woollen goods are taken as all apparel goods made from wool unless otherwise specified.

[3] The concept of elasticity is explained in an Appendix on p. 139.

clothing varies in the same direction but in greater proportion. In a study during the early thirties[4] covering the budgets of salaried employees and workers in Europe and U.S.A., the expenditure elasticity co-efficients for all clothing were greater than unity in eighteen out of the twenty-one samples. This conclusion has received general support from more recent analyses of the pre-war income demand situation; in a sample of twenty countries Dr Gerda Blau[5] found countries with the lowest real income per head had the lowest *per capita* consumption of wool,[6] although in each case the winter climate was severe. Another careful study[7] shows that, in a sample of fifteen various consumer-locality budgets in U.S.A., all except three had an income elasticity of demand for woollen clothing above unity. In addition, large urban populations (Chicago and New York) had the highest elasticity in relation to a given income, while large towns used more woollen clothing *per capita* than smaller.[8] At the same time income elasticity of demand for woollen apparel wear was greater than for other forms of clothing.

In contrast the price elasticity of demand for raw wool is usually much less than unity, so with a given fall in price, the increase in quantity demanded is not sufficient to arrest a contraction in total

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[4] *Family Expenditure—A Study of Its Variation*, by R. G. D. Allen and A. L. Bowley, London, 1935.

[5] "Wool in the World Economy", *Journal of the Royal Statistical Society*, Part III, vol. cix, 1946. Correlation between average real income per head and average *per capita* wool consumption in 20 countries was $0{\cdot}797 \pm 0{\cdot}084$. (cf. F.A.O. *World Fibre Survey*, 1947; correlation between real income per head and major clothing fibre consumption in 25 countries, 1934/38 was $0{\cdot}82 \pm 0{\cdot}068$).

[6] With the exception of U.S.A. In this case the deviation possibly due to the prevalent use of motor transport and central-heated houses combined with the effects of a wool tariff (latter increasing price spread between woollen and other clothing).

[7] "The Pre-War Demand for Wool" by F. B. Horner in the *Economic Record*, vol. xxviii, no. 54, May 1952 (M.U.P.).

[8] Shows woollen clothing expenditure increasing with urbanization. Perhaps this factor results largely from sociological aspects; for the greater the urbanization, it is likely that greater proportions of increased incomes are spent on the purchase of a larger variety of clothes. Owing to price differentiation between woollen and other clothes (accentuated by wool tariffs and cotton subsidies) woollen clothes are a semi-luxury so there is greater substitution to wool with increased wealth. In the same dissertation Dr Horner found that in the U.K., income elasticity of demand in working class budget data (1937/38) was 1·29 for all clothing other than footwear, and for public officials (1938/39) was 0·98.

amount paid. This results largely from raw wool being a raw material in an extensive manufacturing process: with variations in raw wool prices the amount demanded by clothing manufacturers does not change much, for raw wool costs are only a small portion of total manufacturing costs.[9] In other words, when raw wool prices double, the retail price of woollen goods should change by a much lesser amount; for instance, if raw wool costs are 10% of retail prices, a 100% increase in wool prices gives a 10% rise in the retail price. In fact, variations in the quantity of woollen goods demanded result much more from changes in consumer income than from alterations in the price of the raw material.

The position may be more complicated in a dynamic world for numerous reasons. Firstly, price elasticity of consumer demand may be non-existent in the short period with a rise in apparel prices which is not considered permanent, for clothes are postponable purchases: and conversely, with a fall in the price of woollen goods short period demand could be extremely elastic for there may be a contagious buying mania and this could be acute if future prices were expected to be considerably higher. Secondly, in periods of increasing real income, manufacturers (and others) often make an increase in raw wool prices the scapegoat for an expansion in profit margins. This movement is, however, partly offset by mass produced clothes sold in retail chain stores in countries such as Britain and the United States. These firms tend to keep prices equal and constant with their competitors (price-lining), and compete by alternative means such as advertising (oligopoly). All the same this is only a part of the total apparel market and, in general, clothing prices often expand more than raw wool price increases warrant.

Thirdly, as many woollen firms are of oligopolistic structure, textile prices are constant for moderate variations in the trade cycle, and with changes in the price of raw wool the manufacturer uses a greater or lesser amount of reclaimed wool and synthetic fibres in an attempt to keep selling price constant.[10] Probably the

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[9] F. B. Horner, *ibid.* Price elasticity of manufacturers' demand for raw wool in pre-war period was estimated as 0·4 for both U.K. and U.S.A. when quantity and quality variation was included; without quality variation it was about 0·1 in U.K. and 0·2 in U.S.A. In U.K. in 1935 the cost of raw wool was 8% of wool clothing price, and for U.S.A., 14% in 1939.

[10] Especially if under contract to supply textiles for price-lining use. The third point may appear at first glance to conflict with the second; the method chosen depends upon the degree of monopoly control, and under certain conditions, they may work together.

prevalence of this practice is accentuated by the non-existence of satisfactory raw wool future markets and because fibre composition labelling is not a general practice. Actually, fibre substitution by manufacturers rather than consumer responsiveness gives raw wool most of its price elasticity of demand. (This infers that composition labelling would increase raw wool price variations.)

These unstable influences are reflected back to the grower through all sections of the trade and often movements are exaggerated by speculation, inventory policy, the rate of interest and the current international situation. So although the quantity of raw wool in demand may be fairly constant over a year or so, variations in expectations may cause considerable price fluctuations both in daily and extended market periods.

The over-all demand for wool at any particular time is largely dependent upon real income levels. But as raw wool costs are only a small portion of the total cost of woollen goods at the retail level, any variation in income demand or other influences can cause large shifts in raw wool prices without changing the retail selling price very much. In other words, with an increase in the demand for woollen goods the manufacturers, in the scramble for greater supplies, can offer quite high prices to obtain the quantity they desire; and conversely, with a fall in consumer demand, it is difficult to sell all the raw product if the supply of wool remains constant, and as a result, the price falls heavily. If the supply of raw wool were changed in proportion to alterations in demand some of the price variations would not occur—but in the real world the supply is remarkably constant. We can distinguish five factors which influence the supply of raw wool, and as they help us to understand the grower's productive process, we shall consider each in turn.

In the first place, changes may occur in the productive capacity of both land and sheep. Factors which influence the carrying capacity of a given area of land are in the nature of varying pasturage with seasonable conditions, and the long-term physical productivity of land as influenced by farm management and the prevalence of pests such as rabbits. The fleece from an individual sheep will vary with changing conditions like disease and fly strike. However, as these effects are not usually national, and less likely to be international, although output may change considerably in a given area, the world supply of wool will not alter so much. Moreover, as far as the world supply is concerned, produc-

tion stability is often maintained by good seasons in certain areas offsetting adverse conditions in others.

Secondly, in many parts of the world including the Australian pastoral areas, alternative use of sheep country is restricted, so growers tend to keep sheep numbers constant with variations in wool prices. This factor is also influenced—with falling wool prices—by the grower's reluctance to sell sheep which years of breeding have made most suitable for a particular locality. In Australia, although merino sheep numbers may change in higher rainfall areas with alterations in wool prices relative to alternative products, and, as we shall see in Part II, through varied labour and capital costs, this movement (at least in the shorter period) does not affect world wool supplies to any degree. In the better areas most sheep are crossbred and wool is a by-product of mutton and lamb production; but as mutton and lamb prices are relatively constant, the supply of crossbred wool tends to vary even less than merino.

Thirdly, there is a time lag between the grazier's decision to increase production and the actual variation in wool output; the gestation period of sheep is five months and it is at least another year before a mature clip is available. This factor inhibits rapid short-term production expansion more than any other, especially in merino production areas where the lambing percentages are usually low.

Fourthly, as the price of land (rent) in merino sheep growing areas of Australia is a large portion of total costs,[11] interest or rent costs—which are fixed in terms of money—are often a large portion of the gross farm income. Following a fall in price, as the absolute amount of grower's income devoted to paying interest increases, there is a tendency towards extending production in attempts to cover the fixed charges. Thus this aspect is conducive to a higher output with lower wool prices.

Finally, greater production—in wool pastoral areas particularly—is severely limited when considered in the longer period. Any temporary gain from larger numbers is liable to be offset by greater losses in the next drought if the process is carried too far; not only is there a greater percentage loss of stock, but the physical productivity of the land is ruined by over-grazing. As a result, large increases in production to cover interest costs when wool prices are low are neither in the growers' or the national interest.

Although each of these five factors contributes to production

[11] See p. 29.

stability when considered alone, in aggregate the change in world wool output is likely to be even less in the short period, for changes in the volume of output in one direction are liable to be offset by an equalizing opposite movement. Of course it must be remembered that these influences only operate in a period of a few years: over longer periods wool supply may vary in an upward direction through many factors including technological improvements and the relative profitability of wool to other rural products. Wool output can be restricted over a period of years if growers become insolvent and abandon production or change to some other form of farming—for example, raising beef cattle.

The percentage yearly change in world raw wool production in the thirty-four years from 1909 to 1943/44 was very low, for in twenty-nine of these years there was less than 5% variation, in four years the shift was from 5% to 10% and in only one year was the change greater than 10%.[12] As would be expected, the fluctuations in Australian production were somewhat greater in this period: in ten years the change was under 5%; in fifteen years the variation was between 5% and 10%, and in nine years over 10%.[13] Nevertheless this range is very moderate when compared with most other forms of rural production.

Combined with production stability is the policy of wool growers and selling brokers to "Sell and repent but sell", and this keeps market supply very constant no matter what the price. In the fourteen years from 1925/26 to 1938/39, Australian end-of-season stocks as a percentage of annual output were less than 3% in ten years and never more than 7%[14]; and this has been the general case with all exporting countries with the possible exception of Argentina and Uruguay.

To summarize this section, we may state that as the ratio of raw wool costs to the retail price of apparel goods is very low and, as changes in real income may cause greater than proportional movements in woollen clothing expenditure, shifts in consumer demand cannot be counteracted by raw wool price variations to keep total consumer sales constant. Therefore the demand price for raw wool may vary considerably; and as demand switches are

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12 Dr Gerda Blau, *ibid.*, p. 189. Crossbred wool production fluctuations were even less than merino because wool sheep are in areas more prone to drought and meat prices tend to be more stable than wool prices.

13 R. B. McMillan: "Organized Marketing for Wool" in supplement to *Economic Record*, vol. xxv, 1949.

14 Dr Blau, *ibid.*, p. 196.

not offset by changes in supply, the full effects of any alterations in demand are reflected in price fluctuations.

In fact raw wool price fluctuations show considerable movements over both short durations and extended periods. For instance, in the twenty years from 1919 to 1938, the intra-annual price fluctuations were greater for wool than any other commodity except rubber. For merino wools the year's highest price exceeded the year's lowest by at least 38% in half of these years, while for crossbred types, the change was over 60% in four years and greater than 44% in ten. Wool prices were also next to rubber in showing the greatest movements in year-to-year average annual prices, and as with the intra-annual variations, the fluctuations for crossbred wools were more than for merino.[15]

We shall now turn towards an empirical study of world wool production and marketing, and this should give emphasis to the theoretical conclusions we have been drawing in this chapter. At the same time, to show how variations in wool prices may also be affected by other than truly economic motives, we shall examine some of the political influences which have disrupted the wool trade in recent decades. Since we shall concentrate our attention on the situation as it has affected Australia, we should be in a position to understand more fully the place of wool growing in the economy.

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From the 1840's until about 1875 there was a rising tendency in both merino and crossbred wool prices, and this upward movement was associated with a similar trend in the price of all raw materials. With a fairly stable increasing demand, Australian production of greasy wool expanded rapidly as new lands were drawn into use and farm practices became more intensive; for instance, in the fifteen years ending 1875 production increased over 400%. After 1875 the price of all raw materials showed a downward trend. Although the decline in merino prices was severe, especially in the 1890's, crossbred prices fell even more and by 1902 were lower than in any other period in the 100 years ending 1947 except in 1932. From the supply side, the extending and often continuing price disparity between merino and crossbred wools largely resulted from two influences. In the first place, the increasing shortage of readily productive virgin land slowed the rate of merino sheep expansion. Secondly, the invention of refrig-

[15] Dr Gerda Blau, *ibid.*, p. 212.

eration in the 1880's acted as a huge stimulus to crossbred meat production in the New World. Still, with the turn of the century the long-term raw material price cycle showed an upward movement, and even crossbred prices, although fluctuating considerably, followed the trend.

It is probable that after the upheavals associated with the early English Enclosures, only two events have severely ruptured the established tradition of the world wool trade. The first was the combined effects of an extension of wool production into the New World and the European Industrial Revolution; the other and much less obvious was the changes which came with and after the 1914/18 War. Although all nations—with the possible exceptions of Spain and some Arab States—have recovered from the consequences of the former, the effects of the latter are becoming increasingly apparent. In fact three factors initiated through the disruptive developments of the First World War have produced an enduring change in the world wool business. In the first place, as the Axis powers were blockaded their supplies of raw wool ceased, so with the stimulus of a huge demand pressure in Germany, synthetic fibre production changed from an interesting novelty to a commercial reality. Secondly, with the breakdown of the gold standard and sterling, the era of general tariffs and import controls was ushered in. Lastly, the omnipotence of *laissez-faire* marketing was challenged and, in certain periods, the price mechanism of the unrestricted free market has been curtailed or restricted.

In the First World War, although the economies resulting from assured supplies at constant prices were a great inducement to bulk-buying, the Imperial Wool Purchase Scheme—introduced for the purchase of Australian and New Zealand wool in November 1916—would probably never have been evolved if other events had not forced the issue. With a severe drought in 1914 the Australian clip fell approximately one-seventh; increased demand for beef lowered South American sheep numbers; Japan and U.S.A. increased raw wool purchases considerably; and as there was a danger that British war requirements would not be supplied, coupled with the possibility of Axis imports, opposition was disregarded and the Australian wool clip was bought until June 1920 at prices about 55% above pre-war levels.[16]

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16 In 1917 South African wool was included in the scheme which operated until June 1919 for that country.

As the demand for both meat and crossbred wool (for military clothing and equipment) was very great during the hostilities, crossbred wool production increased along with a decline in merino supplies. But after the war, as the need within Europe for fine wools was considerable owing to pent-up demand, the price of merino wool at the London market rose over 100% in the year ending April 1920. Actually the boom period was very short for not only was European demand over estimated, but the huge war-time stocks plus the reimposition of the U.S. tariff caused an equally sudden market collapse, and this was most severe for crossbred types. The increased supply of crossbred wools—although inevitable with the changed pattern of world mutton and lamb production over the last half century—was accelerated by a temporary inflated demand during the 1914/18 War, and ever since the early twenties fluctuations in its price have increased with ever-widening range.

As the U.K. Government had a huge accumulation of over 2·5 million bales (at the time greater than total Australian annual production) and the selling market was unsatisfactory, the British Australian Wool Realization Association (B.A.W.R.A.) was formed in January 1921 to dispose of these stocks. This organization (owned by Australian wool-growers) was the first attempt at a form of peace time price control through variations in the quantity supplied. Market allocations of B.A.W.R.A. wool were fixed monthly, the volume varying with the quantity of "new-clip" wool sold by the Australian National Council of Wool-Selling Brokers and the market price position. Market conditions remained depressed during the initial period of B.A.W.R.A. sales, and the Australian Government fixed a minimum price for wool at a flat rate of 8d. per lb. in response to pressure from all selling sections. These restrictions were only applied for six months and, in fact, the Australian price never fell to the fixed minimum. However: "It was held by some that the mere existence of a legal minimum reserve price helped to restore confidence and to sustain the market in an extremely difficult trading period."[17] Probably these "some" were wrong, for in periods of rapidly falling demand legal minimum prices caused by panic usually destroy the remnants of confidence, and if other things remain the same, prices soon fall to the statutory minimum. In any case, owing to a general recovery and increased Continental demand for wool (particularly from Ger-

[17] Dr Gerda Blau, *ibid.*, p. 219.

many) wool prices showed an upward trend in the three years ending 1925 and all B.A.W.R.A. stocks were sold on this market.

This price rise was regarded optimistically and sheep numbers grew in all areas except Western Europe; world production of crossbred wool expanded with buoyant meat prices, and as the increase within the great exporting countries was accompanied by a decrease in domestic clips of nations traditionally dependent upon foreign supplies, an expansion in the volume of world trade resulted.[18]

Although there was a price decline after 1924, wool growing remained relatively profitable in Australia, for until 1929 the average annual price was never less than 16d. per lb., and in the 1928/29 season, rose to 19½d. Following a general improvement in breeding associated with a relative production expansion on better land, the Australian wool clip increased considerably: in the last five years of the twenties gross wool output averaged nearly 30% above the average of the first half of this period while the increase in sheep numbers was only 15%.

The era of profitable wool growing came to a sudden end with the Wall Street collapse in 1929, and as the demand for raw wool is a dependent variable on the level of consumer's real income, the fall in wool prices was much greater than for most raw material commodities: the price index of all raw materials dropped 32% between 1929 and 1933, but the index for merino wool fell 54% and the crossbred price decline was 60%. This adverse movement was reflected in the average price paid to Australian wool producers; in the year ending June 1929 the price was 16½d. per lb., but in the 1931/32 season returns had fallen about 50% to 8½d. Prices remained low through most of the thirties, and although the Sauerbeck Index shows a rather erratic recovery after 1932, the average Australian price per lb. of greasy raw wool for the decade was only 11·8d.

It is probable that only the most efficient Australian graziers grew profitable clips in these years as the average cost of production per lb. in the thirties appears to have been in the vicinity of the average receipts. There is a great shortage of information about graziers' costs, but reports by three commissions show interesting results. The earliest, a report by the Commonwealth Wool Inquiry

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[18] Although exports from the La Plata Republics were reduced, the average exports from 1926 to 1929 were 10% more than the average from 1909 to 1913. (Australian exports expanded 18% in the same period.) I.I.A., *World Trade in Agricultural Products*, Rome, 1940, p. 432.

Commission of 1932, assessed from a sample of 668 medium to large sheep runs that average cost at the point of sale was 9½d. per lb. (excluding all interest), and working expenses[19] were 71% of the total. The Payne Report of 1939 assessed the average cost at point of sale to be 8·8d. per lb. (excluding all interest) after an examination of 460 Queensland properties and gave working expenses as 67% of this total. A Royal Commission in 1940 on the Pastoral Industry in Western Australia calculated from returns of 177 sheep stations that average costs (again excluding interest) were 8·3d. per lb. and working expenses 61% of this sum. When interest charges are included, the average costs in all reports showed a large increase. In the first, interest on borrowed capital was 18·5% of total costs (or 44% if calculated as interest on capital invested); in the second, interest on capital invested (at current market prices—which were depressed) added 22·5%; in the third, interest on borrowed money added 12·4%.

The high proportion of interest to total costs in the thirties not only lowered production efficiency, but since graziers tend to spend quite freely, probably lowered their expenditure more than it raised that of the rentier class (i.e. the level of Australian effective demand and employment was lower than if wool-growers had not been indebted). As high wool prices in recent years have made it possible for graziers to reduce their indebtedness, they should also use the present opportunity to acquire the most efficient capital resources so as to lower average production costs still further. Such action would not only help to maintain profitable export production with low prices, but at the same time, would arrest a fall in the level of domestic demand when least desired.

As well as the effects of reduced real income upon the price for raw wool, the low demand price in the thirties was also due to a combination of other factors, several of which will be considered below.

Firstly, the often quoted Hawley-Smoot Tariff of 1931 raised the United States import duties on raw wool to 34 cents a pound: as this tariff was specific in nature, with falling world prices the tariff percentage in the American landed price showed a proportionate increase. That is to say, even though the total amount of wool demanded does not expand much with falling prices, any marginal increase was more severely restricted in this case; and in time, with the aid of this double-edged protection from high

[19] i.e., less drought costs, marketing and depreciation expenses.

specific duties, competitive fibre and domestic wool production expanded.[20] In the later thirties U.S.A. drew much less than one quarter of her apparel wool requirements from abroad as against almost a third in the mid-twenties, and the reduction in imports from Australia was particularly severe. In the five years ending 1929/30 the average imports from Australia were 34 million lbs, while in the three years from 1932/33 the average amount was only five million.

Actually, the percentage of the Australian clip exported to America has always shown considerable variation. Discounting the rather erratic American buying moods, these fluctuations are readily explainable. Firstly, with specific tariffs at a fixed rate per pound, free market price changes have a lesser effect upon the total amount demanded and, through this, quantity consumed has been correlated to an even greater extent than normally with real income levels. Secondly, the pre-war American domestic clip averaged near 450 million lbs per annum and the additional domestic requirements of about 50 million lbs were imported. Hence an augmented American total consumption, from, for instance, 500 to 600 million lbs (i.e., a rise of 20%) increased imports by 300% from 50 million lbs to 150 million lbs, and, alternatively, a moderate decline in total American consumption likewise led to a drastic curtailment of imports.

As an example of political interference in the wool market the clever pre-war German game of bi-lateral bargaining is illuminating. In March 1934, when Germany announced the prohibition of wool imports pending the appointment of a Controller (and Italy declared that barter agreements were necessary), the wool market collapsed. The London April sales were postponed, and when the May Brisbane sales showed a huge price decline, Sydney sales for the next month were cancelled. Actually, the price fall was largely caused by German propaganda which overrated the quality of German synthetic fibres so as to conclude a barter agreement with Australia favourable to Germany.[21] As a result future wool prices were expected to decline, so buyers precipitated the condition by postponing immediate purchases.

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[20] In 1938, United States domestic production was 436 million lbs against an average of 321 million lbs from 1924 to 1928. (Of course demand for mutton and lamb as well as wool tariffs effected this increase.)

[21] An agreement was concluded with South Africa in February 1936 for the exchange of wool against German manufactures.

The German scheme failed owing to the Australian Government's diffidence towards British exporters and domestic manufacturers, and consequently there was no barter agreement. At any rate this decline in price was more than offset after the immediate collapse by increased exports to the United Kingdom, Japan and Belgium.

Then thirdly, the depression had most adverse consequences upon the French woollen industry. Not only did the world consumption of woollen goods fall in this period but there was a general increase in world textile tariffs. The latter factor affected the French industry particularly as it depended, as now, largely on exports to non-French areas and was therefore outside domestic free trade or the snug group within protected and preferential markets. Although there was some improvement following the devaluation of the franc in 1936, the French textile depression was long and severe, and imports of Australian raw wool never returned to the pre-depression levels.

Another factor which has influenced Australian real national income as well as wool prices has been concerned with Australian and Japanese political relations. In the 1935/36 season Japan took 31% of Australian wool exports, and in fact, if Japanese demand had not increased in the early thirties, Australian wool prices would have been much lower than they were. Still, as that country was trying to do the same as Britain had done a century before, the Lancashire Group took pious exception to this repetition, and with the support of the Australian Associated Chamber of Manufactures, coerced the Lyons Government into restricting Australian imports of Japanese goods in 1936. Since Australia had a favourable balance of trade with Japan at the time, and in view of the prevalence of bi-lateral clearing arrangements, Japan took the necessary step of restricting imports of Australian wool. As a result of this factor, wool prices declined over 30% in 1937 and it is interesting—and at the same time saddening—to see the same thing occurring once again in 1954/55. The immediate effect of this type of policy is to cause an expansion of synthetic wool research and production in the country against which the discrimination is applied.

Although war may result from most diverse factors, even the most cursory study of history shows that on many occasions armed expansion follows commercial restriction. It should not be inferred that Japan would not have gone to war if other countries had not

discriminated against her exports, but policy in countries like Australia should be conditioned by reason, and to restrict trade with potential enemies can cause the feared conflict to develop.

Another factor that influenced Australian wool prices in the thirties was the Ottawa Agreements of 1932. As far as the Australian wool-grower was concerned this Imperial Preference policy was distinctly harmful. Firstly, because the United Kingdom traditionally purchased its raw wool requirements from parties to the Ottawa Agreements, no increased British preference could be given. Furthermore, Imperial Preference restricted the sterling earnings of countries outside the group and, because of bi-lateral trade methods, non-preference countries were largely forced to discriminate against Australian wool. This gave a boost to synthetic research and production besides lowering Australian raw wool prices. Moreover, as we shall see in Part II, Imperial Preference raised wool-growers' costs; so as a result the Australian wool industry lost all round.

Since these varying political moves in the thirties affected and distorted wool prices, it should be apparent that the long-term evolution to the achievement of stability in raw wool prices is concerned with much more than income levels or control of auction room sales. Indeed, it should be the policy of wool-growers to redress distortion of the types outlined above, as many of these, through their effects on the money profitability of synthetic production, are of considerable danger to the raw wool industry.

The wool trade and marketing situation again changed with the outbreak of war in September 1939 and within two weeks the United Kingdom Government, as a result of agreements concluded as early as 1938, announced its decision to purchase the entire Australian and New Zealand clips for the duration of the war and one wool year thereafter.[22] Since the flat price of 10¾d. stg. per lb. (13·4 Aust.) was considerably higher than the average of previous seasons, and owing to the Australian grazier's patriotism, there was little grower opposition to bulk purchase. The contract price covered the whole clip, but as raw wool is heterogeneous to an extreme, over 1,500 price types were tabulated and each lot of wool was inspected, as with auction sales, to fix its appraised value.

In the first year of the war most of the Australian clip was sent to the United Kingdom to supply urgent needs, but as the German U-boat plague grew worse, more wool was either stored in Aus-

[22] A similar agreement was introduced somewhat later for South Africa.

tralia or shipped to U.S.A. as a strategic reserve.[23] Wool purchases by the United States rose considerably and increasing amounts of Australian wool were bought[24] as annual consumption rose to all-time records of about 1,000 million lbs greasy.

For 1942/43 and later clips the flat price was increased to 15·35d. Aust. per lb., and as wool growing took relatively little labour, Australian wool production was maintained except during drought periods. At the same time, although consumption increased considerably in the United States, Australia, Argentina and India, as the Japanese and European markets were lost, and because United Kingdom civilian supplies were rationed at approximately 65% of pre-war levels, world consumption during the war could only absorb about two-thirds of the current supply. In Australia, the relative profitability of wool reduced sales of sheep for meat canning, and since the Commonwealth Government wished to allocate resources to essential production in short supply, restriction of wool growing was considered, but with the threat of strong grower opposition was quietly dropped (see page 114).

As a result, after six years of war the United Kingdom Government's accumulation of Dominion wool was over 3,300 million lbs greasy (63% Australian), and equal to about two years' normal consumption.[25] This huge supply caused considerable concern about methods of disposal, and a conference of representatives from Australia, New Zealand, South Africa and the United Kingdom in 1945, estimated it would take twelve to thirteen years to dispose of these stocks in conjunction with current clips. The conference concluded that a United Kingdom-Dominion Wool Disposals Limited (Joint Organization) should be formed, incorporated as a private registered company and given the task of surplus disposal in conjunction with current clips. All wool owned by the United Kingdom Government was transferred to the new organization, and as auction sales were judged the most efficacious method of selling, this system was combined with Joint Organization (J.O.) activities.

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[23] For transhipment to Britain when shipping available. Established to provide against a possible interruption of shipping in the Pacific and as a readily available reserve to supply Europe on liberation.

[24] Australian wool sold to the U.S.A. 1939/40, 50,000 bales: 1940/41, 814,500 bales. (*The Australian Economy in War and Reconstruction* by E. Ronald Walker, Oxford, 1947, p. 193.)

[25] Actually world stocks were over 4,000 million lbs as 700 million lbs were owned by U.S.A. and South American Governments.

To assure a measure of price stability, a reserve price was fixed on all wool offered for sale, and this was purchased by J.O. if commercial bidding did not equal the level fixed. The reserve price itself, although ostensibly secret, was governed by the general level of wool prices. Thus with a general fall in prices J.O. stocks were to increase: when prices were considered reasonable, selections from stock were marketed with the aim of reducing fluctuations and decreasing the surplus. In all, the functions of J.O. were more complete and wider than those exercised by B.A.W.R.A. —especially in regard to the fixing of reserve prices, the control of sale and purchase of "new-clip" wool, and the active interest in stimulating demand. Actually, as is well known, the J.O. buffer stock system did not succeed in stabilizing price movements except perhaps in the shorter market period. This was due to the disparity between world supply and demand in post-war years, and as raw wool costs are only a small portion of the retail selling price of the final products, abnormal prices could be offered in the scramble for available supplies.

The world production of raw apparel wool has increased over the pre-war average but the amount grown is less than the high obtained in 1941/42. Also, largely owing to droughts in the pastoral areas, the limited expansion opportunities in drier regions and the increasing profitability of dual purpose sheep, the percentage of crossbred wool has increased relative to merino. Although crossbred wool production is now at record levels, merino supplies are still less than the pre-war average.

World wool consumption advanced considerably in the post-war years, and as production did not expand in proportion, excess consumption was supplied by stocks accumulated during the war.

PER CAPITA CONSUMPTION OF WOOL
1938 and 1949 to 1951

	1938	1949	1950	1951
Europe (ex. U.S.S.R.)	2·9	3·1	3·3	2·6
North America	2·4	3·5	4·2	3·3
Central and Sth America ...	0·9	1·1	1·1	0·9
Asia	0·18	0·13	0·15	0·18
Africa	0·29	0·31	0·26	0·26
Oceania	4·4	6·4	6·8	5·5
WORLD AVERAGE	0·9	1·1	1·1	0·9

Source: World Wool Digest.

It is interesting to note, on a *per capita* basis, the large increase in wool use in Europe and North America which was mainly responsible for the expanded world consumption. Although post-war figures of *per capita* consumption are not available before 1949, consumption was high in those years, and with this unexpected demand J.O. quickly sold all its stocks; thus instead of arresting increases in price to fantastic levels, it merely cushioned the rate and fluctuations of the increase. As the output of both merino and crossbred wool is rising, and because world *per capita* consumption has declined somewhat from post-war peaks, it is probable that production will soon meet current demand if other things remain equal.

In January 1950, as Joint Organization sales were nearing completion, representatives from Australia, New Zealand, South Africa and the United Kingdom met to consider proposals for new wool marketing arrangements. The scheme evolved was essentially similar to that of J.O. The various governments agreed to the plan but in Australia it was submitted to wool-growers for approval in August 1951, and when rejected by a vote of 80% against participation, the project collapsed.

Actually it is questionable whether a reserve price scheme of this nature could have worked smoothly as its managers would have faced a fundamental dilemma. If on one hand the purpose was to iron out fluctuations from day to day the reserve price would have needed to be near the market level; if on the other, the wish was to even out cyclical fluctuations, price movement in short period would still have existed.

In fact, stabilization of wool prices would be even more difficult for at least two reasons. Firstly, even though it may be easy in retrospect to assess whether price changes were due to cycle or trend, it is extremely perplexing when the movement is in progress. Secondly, wool stabilization plans imply schemes within a general scheme; wool is used for many and various purposes, and although the average price may not vary, the spreads between the types may.

This is not to suggest that stabilized prices are not desirable but merely to point out some of the major difficulties which must be overcome before a worthwhile marketing scheme can be implemented. Actually, as constancy is the aim, and in regard to the changes which take place in demand as compared with supply, it is, indeed, rather ironical to even up price by upsetting a constant supply. Of course this aspect is also applicable to other rural products, but in regard to the extra physical difficulties

involved in marketing wool as against, for example, a relatively homogeneous product such as wheat, perhaps the only expedient long-term solution against fluctuations in wool prices lies in the direction of assuring constant consumer demand or, in other words, mitigating as far as possible swings in the trade cycle.

However, if many of the political distorting factors such as those which existed in the thirties (and also, today) could be removed, some of the price fluctuations which exist in the wool market could be withdrawn. Most of these aspects, moreover, although ostensibly in the national or wool-growers' interests, often rebound on the other foot. For instance the Australian discrimination against Japanese goods is an obvious illustration of a case where not only wool-growers lose income, but inasmuch as Australia is not buying in the cheapest market, it leads to a reduction in the Australian real national income.

These political aspects usually lead to an expansion of synthetic fibre production. For example, in U.S.A., although the professed reason for the high wool tariff is to protect American domestic raw wool producers, it leads at the same time to a lower United States consumption of pure wool and, through a higher than normal supply price, to opportunities of greater profits from research into synthetic alternatives and their production. Thus American utilization of synthetics is now at very high levels, and not only does this lower the price of Australian wool (and the opportunities of earning dollars) but it also causes, in the long run, a fall in the income of American domestic wool-growers. To take the argument to its conclusion, as Australia does not earn as many dollars as it could with freer trade, it is unable to import as many products from America, and this leads to a reduction in the United States real national income. Instead of being a wool importer America is, in 1955, trying to find overseas markets for certain types of wool production which are in excess of domestic requirements.

We may conclude by stating that unless the various restrictions on the international trade in raw wool and textile products are lowered, the growth of synthetic production will continue to expand rapidly. However, Australia must take its own part in a general liberalization of trade and must give advantages as well as take them. We shall return to this discussion in Part III.

Of course, most discussion on the wool trade in the post-war years has centred round the inflated wool prices, but as this subject has been so well traversed it is unnecessary to go over the ground

again. Here is an example of the price that manufacturers can afford to offer when demand exceeds supply. As raw wool is a large portion of Australian exports, the high prices have led to a greatly increased real income in Australia. Moreover, since through residual multiplying effects, the high prices have helped to raise effective demand in Australia to levels greater than those consistent with full employment, considerable amounts of inflation have resulted. To combat the inflationary pressure the Menzies Government instituted a special tax on wool receipts. However, as the funds from this tax were used merely in government expenditure, the net effect was not a reduction of spending power but only a selective excess tax.

Nevertheless, if for no other reason than to arrest the large profits obtained in synthetic production, it is in the long-term interests of both the wool-grower and the Australian real national income that export wool prices should be lower than those obtained in recent years. All the same, it would be silly to lower export prices considerably, for in this case, as demand *ex hypothesi* still exceeds supply, the price paid for synthetic alternatives may merely rise more. Rather, the problem must be solved by a free-trade equalization of supply and demand.

CHAPTER 3

The Wheat Industry

In the last thirty years wheat-growers in Australia and other wheat exporting countries have experienced considerable fluctuations in their selling prices and have suffered through the resultant effects on incomes. In recent times the aim of policy both within Australia and in the international field has been to mitigate undesirable price movements: but success has only been partial. Not only have political difficulties continually cropped up, but certain features of supply and demand significant to wheat itself make successful planning an onerous task.

Although wheat prices have shown movements somewhat near the magnitude of those of wool in recent decades, the causal influences of the fluctuations themselves are rather different. Wheat is usually grown on family farms, and although wool growing is generally of similar organization, the family of the latter usually employs more hired labour, so variations in production do not normally influence to the same degree the amount of "effort" the wool-grower's family personally expends. Since these characteristics are less commonplace in wheat growing, with a rise in price the farmer is inclined to spend some of his increased income in the form of leisure and let output fall off:[1] whereas when prices fall, he tends to increase output to make up for falling average receipts —and this is especially so if he has interest charges to meet. Thus, in aggregate, instead of world wheat supply rising and falling in proportion to price changes, the opposite conditions of expanded supply with low prices and contracted supply with high prices appear to operate. Although these aspects are to varying degrees pertinent to all rural production (and thus help to explain the instability of rural prices) they appear to be most appropriate

[1] For wheat, as with all non-livestock farming, "effort" or labour is directly proportional to changing acreage within existing investment (with given seasons). In wool growing, because the organization and management is different, marginal variations in sheep numbers on a given station do not call for equal changes in labour expended. This is another reason why wool supply is not backward rising with increasing price—although it is, of course, extremely inelastic.

to wheat production, and produce—in jargon—a backward rising supply curve as shown in Figure 2 on page 40.

For many people wheat or bread consumption varies inversely with real income, and wheat is, therefore, termed an "inferior" product. That is to say, in low income groups and in communities with a low average income per head, bread is an important part of total consumer expenditure, and other foodstuffs are "luxuries": with a rise in the price of bread, increasing quantities of this relatively cheap commodity must be substituted in place of the more expensive foods to keep total expenditure on food consumed as constant as possible. This gives, in contrast to wheat supply, a backward falling demand curve: the quantity demanded increases with price. In more advanced communities where bread is no longer an important factor in expenditure, moderate variations in its price do not affect consumption to any degree and thus its demand is very inelastic. On the other hand, in some areas such as Eastern Europe, South America, Asia and Africa, wheat competes with other grains for consumption, and changes in its price (in the competitive range) can cause large variations in its consumption.

If we take the world as a whole, it is probable that the price elasticity of demand is severely inelastic except when prices fall to very low levels; hence, unless the bottom falls out of the market, demand is very constant. When the price of wheat is extremely low demand expands: under these conditions it is both a profitable livestock food and raw material for industrial use such as alcohol production.

Within the duality of inelastic (or even backward rising) supply and also, perhaps to make matters worse, backward falling demand, lies the fundamental reason for the instability in wheat and other staple food prices.

Situations—which appear to be appropriate for wheat—in which the supply curve is backward rising involve the possibility of multiple equilibria. This condition is shown in the figure on the following page.

When the demand schedule is at D2, supply and demand can be equal at three different prices (a, b or c) of which the middle (b) is totally unstable.[2] Although (a) and (c) represent stable equilibria, the price variation between these points compared with that

[2] Because demand exceeds supply at prices higher than (b), and supply exceeds demand at prices below (b). Thus price cannot come to rest at this point.

of quantity is considerable. Moreover, when demand shifts slightly (represented by D1 and D3) the price change can be quite large. For instance, in a shift in demand from D2 to D1, price may move from either (a) or (c) to (e). The significance of potential multiple equilibria lies, therefore, in the fact that relatively small changes in the conditions of supply or demand may necessitate a switch from a high price to a low price equilibrium

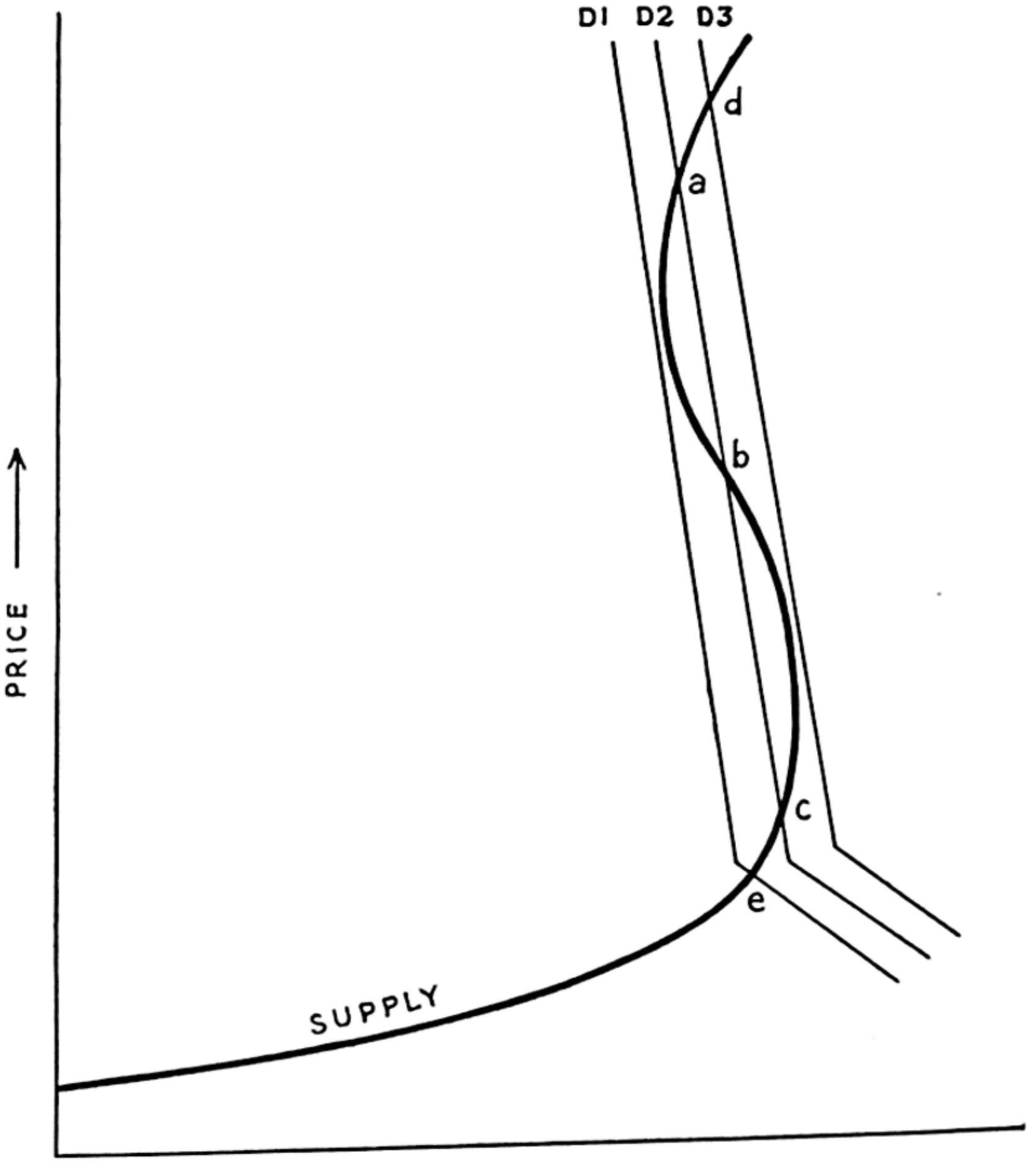

FIGURE 2

SUPPLY AND DEMAND SCHEDULES FOR WHEAT

or vice versa; and this can cause, as shown above, disproportionate changes in price.[3]

Because bread is an "inferior" commodity, the inelastic demand for wheat is inherent within the nature of the product itself. Therefore any movement towards lessening the magnitude of price fluctuations has generally been concerned with mitigating, as far as possible, the undesirable changes in output as influenced by shifts in grower's income. If wheat supply were somewhat more elastic, then the more pronounced price variations would not occur. For example, with an elastic supply, a switch in demand from, for instance, D2 to D1, would always give a relatively small price change—such as from (c) to (e)—and never the striking shift from (a) to (e).

We will now turn to consider in some detail the recent history of the Australian wheat industry, and in both this chapter and at later stages we shall refer to possibilities of introducing plans conducive to encouraging growers to produce more wheat with a higher price and a lesser amount following a fall in price.

It is probable that many of the difficulties within the Australian wheat industry in the 1930's had their origin in the Great War era, for in that period wheat prices doubled and production increased rapidly through a substitution on farms towards wheat production and away from growing other products. This tendency continued in the twenties, for the annual average price during the whole decade was never less than 4/3d. a bushel, and at the time this gave reasonable returns in relation to costs on most established farms.

With increasing pressure on land during this period the acreage planted spread out from the wheat belt into the semi-dry grass and scrub land of the pasture regions. As the future was regarded optimistically many returned soldiers and others settled on the land in the general prosperity. This was later to cause considerable financial distress, for not only was this new land usually submarginal for wheat in a soil-climate sense, but expectations of continued high prices made near-desert land marginal in a rent

[3] These inherent conditions of supply and demand cannot explain the large day-to-day or month-to-month variations that occur on the wheat market. The supply and demand schedules discussed above only determine average prices over a season or two. As the market does not equate supply and demand continuously—from week-to-week for example—short period price fluctuations originate through market changes broadly similar to those outlined for wool on pp. 22 and 29-32.

or price sense. Hence, in the 1920's, marginal areas acquired an ephemeral price respectability as does the condemned house with a coat of paint. In Western Australia there was a particularly large boom in wheat land, and with great expectations investment increased considerably; so along with inflated land values the acreage sown trebled between 1921 and 1930.

In this manner the two great rehabilitation problems of the depression and the post-depression era were created. Firstly, from over-valuation and settlement on marginal areas in the twenties followed difficulties in debt adjustment and decreasing average quantity returns (from increased production in the form of narrow rotations) in the thirties. The second problem was just as serious in a different sense, for in the spirit of the times, it led to greater difficulties in rehabilitation on a national scale without international co-operation. As home consumption did not increase in proportion to expanding output in the twenties, a greater percentage of the total wheat crop was sold on the export market; so in this period, as compared with the previous decade, the total quantity of wheat exported increased 63% and that of flour 70%.

The Australian wheat boom of the twenties had its counterpart in other large wheat exporting countries, and by 1928 world production was particularly large when 340 million more bushels were harvested than the average for the previous two years. A poor season in 1929 was expected to relieve the situation (for, as we have seen, world wheat consumption is relatively constant—especially over a few years), but when that was also good and Russia appeared likely to export some wheat, prices fell rapidly in late 1930. Large crops in 1931 and 1932 followed by good yields in many importing countries in 1933 caused, without considering the aid of the depression itself, low prices to persist.

To maintain the total value of wheat exports (as the balance of payments was in a state of acute strain) the Commonwealth Government urged farmers to grow more wheat in the 1930/31 season, and with an acreage expansion of over 22% compared with the average of the two previous seasons, production was considerably greater. This increased the financial distress of individual growers as the average price (f.o.r.) that year was 2/4½d. and most producers failed to cover even variable costs.[4] If the average cost

[4] In the second report of the *Royal Commission on the Wheat, Flour and Bread Industries* (Australia, 1935), it was stated that only 20% of growers produced with variable costs of less than 2/2d. a bushel (para. 66), and average total costs were 3/6d. a bushel (para. 83).

of production is taken as 3/6d. a bushel and average returns as 2/4½d., then the extra contribution by the wheat industry to the balance of payments through its increased production in 1930/31 cost the growers £4·9 million.

In the following years, although prices remained very low, production continued at very high levels without the stimulus of a direct national campaign; for with reduced average returns per bushel farmers expanded production in attempts to either maintain money incomes or cover fixed interest charges (which naturally came more and more into line with income as the latter fell). During the worst depression years acreage sown increased 20%: from an average of 12·8 million acres in the five years ending 1929/30 the acreage expanded to an average of 15·25 million in the four years ending 1934/35.

For those with large liabilities on an acreage basis the opportunities for meeting interest charges from current production were nil; thus many farmers with adamant creditors wisely walked off their farms. Others, indebted to a lesser extent, who increased production considerably in an effort to maintain total returns, were not in a much better state, for the only considered method of sustaining farm income in the short period without new capital investment was to grow more wheat. Individual farmers could do this only by shorter rotations; but constant wheat production, coupled with less variable resource use such as fertilizer, reduced average quantity returns in relation to given resource employment. Thus, within the methods they adopted, the farmers' hands were tied no matter in which direction they turned, and as most sought relief with an increase in output the long-term result was ruined land. Country which with good management could have grown a satisfactory crop every three or four years, became a spreading sandy waste; and a common sight in the late thirties was huge areas of sand dunes spreading out from former wheat paddocks to cover derelict fences and even roads and deserted farm houses. As banks did not generally force foreclosures and often advanced money for production expansion, they too, by accident, must share the blame for this catastrophe.

Although the total quantity of farm produce grown usually increases with low prices over a few years, that of a single product need not do so if there are profitable alternatives. But this was not so with Australian wheat as all products which could be readily substituted in the wheat belt had also suffered from the general price collapse. Nevertheless, besides numerous small sidelines,

the Australian wheat farmer usually keeps a flock of sheep to graze the land out of crop, and if wool prices are high the tendency is to increase sheep numbers at the expense of wheat acreage through introducing wider rotations. This has been particularly apparent in more recent times and has proved beneficial to wheat yields.

As with wool production, the Ottawa Agreements did not give the Australian wheat-grower much market monopoly in the United Kingdom as Canada was also a party to that agreement. Moreover, the British domestic producer was well protected against all imports through a "deficiency payment" on production and the requirement that all flour milled in the United Kingdom had to contain a certain portion of domestic wheat. In fact, Imperial Preference appears to have been to the detriment of the wheat-grower, for not only were other markets such as those to countries like Italy closed in retaliation, but tariffs on farm machinery from U.S.A. and other non-Empire countries increased.

Moreover, in the thirties, Australian wheat lost much of its advantage over Canadian in the United Kingdom market. This change in favour of Canada was mainly due to that country's semi-monopoly supply position in high quality graded wheat, which, being used for more specialized purposes, is not as "inferior" as the fair average quality Australian types.[5]

Australian export wheat prices were chronically low all through the thirties, for although the average price in 1937 rose to just over 5/0d. a bushel, the average seasonal export price for the whole decade was 3/8d., and for the 1939 season 2/4d. With this constantly depressed export market and pessimistic outlook within all sections of the industry, growers felt unable to recover from financial distress without government assistance, which among other things, would give a guaranteed and stabilized price. Thus in early 1930 began a series of conferences, bills and enactments, which in tortuous and spasmodic progress have led slowly towards a general stabilization system.

Legislation on wheat marketing in Australia, as with other rural commodities, has been restricted by the Commonwealth Constitution, for among other factors it has made agreement by all

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[5] Although grading gives higher returns when world prices are low, its advantage at other periods is doubtful. In the post-war period the spread between Winnipeg prices for top grade Canadian wheat (No. 1 Northern) and for feed wheat increased only 10% while the average price advanced 270%.

State Governments necessary to the functioning of any scheme. As we shall examine Constitutional points in some detail in Chapter 10, we will not encroach upon our future considerations at this stage. However, it should be borne in mind that much legislation has tended to be cumbersome if for no other reason than to evade Constitutional difficulties.

Nevertheless, this is only one factor and the wheat industry has suffered from two other influences—especially apparent in the thirties—which have made stabilization difficult. Firstly, as a large portion of the total crop was (and is) sold on the world market,[6] world prices have had a large effect upon returns, and in periods of continuing low prices, profitable guaranteed prices in respect to the total crop have been very difficult to maintain without heavy government support. Moreover, if the guaranteed price for wheat happens to give a greater margin of profit than alternative activities available to the wheat farmer, production increases since wheat is grown instead of other farm products; and with relatively constant home consumption, the export surplus is enlarged and the whole position aggravated. Secondly, and arising out of the first influence, financial assistance must grow with increased production to keep the aid, on a per-bushel basis, constant.

Thus the governments of the day were in a dilemma: not only were they to avoid both production control and keep total financial assistance at a minimum (for political, not economic, ends), but besides guaranteeing prices, it was necessary to eliminate the marginal producer. The marginal wheat farmer certainly increased the difficulties of effective action. That he was to change from wheat growing was agreed, for not only was wheat production in low rainfall areas increasing the spread of erosion at an alarming rate, but growing was uneconomical as average receipts rarely covered average costs. The first attempt to escape this difficulty was embodied in the Wheat Industry Assistance Act of 1938, for out of receipts from a home-consumption price of 5/2d. a bushel, £500,000 was to be applied to the direct relief of distressed growers and the removal of wheat producers from marginal areas.[7]

As the Commonwealth Government had distributed funds to the wheat industry, either as a bounty or relief, at a rate of approxi-

[6] In the period 1930/31 to 1939/40, 48% of Australian wheat production was exported.

[7] Of course there were other difficulties such as "What is a marginal area?"

mately £3 million a year from 1931, and since there appeared to be no particular improvement in the position of the grower, a Royal Commission was appointed in 1934, so as among other things: "To inquire into and report upon the economic position of the industries in growing, handling and marketing wheat."[8]

After an intensive survey the Royal Commission reported that over 60% of farmers could not produce for less than 3/3d. a bushel[9] and that government aid from 1931 had merely enabled losses to be reduced. The members concluded, that in regard to the national importance of the industry, steps should be taken to rehabilitate it; the method proposed was a home-consumption price on wheat used in flour that would be in excess of the world parity price. It was suggested that the tax on flour (to provide the funds) should vary inversely with wheat export prices and home consumption price of wheat should be constant. To administer this plan the Commission recommended that a compulsory marketing scheme should be established.[10]

This plan was strongly resisted by an influential Australian economist, the late Professor L. F. Giblin, and although his logic was sound his conclusions were—as we shall see in Part II—overrated.[11] Nevertheless, the home-consumption price technique, as will be apparent from our discussions in Chapter 10, has many other disadvantages, which makes it an unsatisfactory form of relief, especially in depression periods.

Nevertheless, it may be pertinent at this stage to consider one point in relation to a domestic tax on flour as a method of raising producers' incomes. As the retailers' margin is usually a percentage

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[8] From the preamble to the first Report.

[9] Second Report, para. 65.

[10] Mr T. S. Cheadle dissenting.

[11] Professor Giblin's reasoning for such a conclusion ran as follows: as wages in Australia are tied to "cost of living" and as lower income groups consume relatively greater quantities of bread, increases in price will automatically (after a short period) increase wages—thus in the first instance an increased home-consumption price puts a burden on consumer (and lower income section) and in the second, on production costs. With increased production costs, sheltered industries (coal, building, tariff protected etc.) would pass on costs in increased prices, and as increased prices would raise basic wage through "All-Items Index" in cost of living scale, sheltered industries would again pass on increased costs in the form of higher prices etc. As the unsheltered industries (export primary products, factory goods competing with imports) would be unable to pass on their share of increased costs in higher prices, they would, before long, bear the whole burden of the subsidy to the wheat industry.

of selling price, with a higher price for bread through the tax (or any other commodity for that matter) the retail price increases more than by the amount of the taxation. Therefore the total cost to the consumer is greater than if the tax were collected by direct means.

In October 1935 Commonwealth and State Ministers met with representatives of various sections of the wheat industry in order to evolve a system of guaranteed prices. Besides the plan submitted by the Royal Commission three others were suggested, but fundamentally all were similar inasmuch as they gave a guaranteed home-consumption price without production control. Different States and branches of the industry pushed their various schemes so there was little agreement when the conference broke up, and all plans were shelved. In 1936 and 1937 the demands for stabilization were not so acute for in these years the average export price was 4/7d. a bushel and the seasons good, and although there were many "ideas",[12] very little was done until world wheat prices fell severely in 1938 and 1939.

The predominant influence of the conditions of external supply and demand upon the financial plight of the industry in Australia was again demonstrated in these years. Although the price of wheat fell in this period it had nothing to do with any change originating in Australia. In this connection wheat was 2/4d. a bushel in Australia in 1939 through a combination of factors and these included: increased production in North America; a larger average yield in the Danubian basin as a result of improved technology; decreased wheat imports into many countries as a result of tariff protection and increased home production;[13] and the decline in the *per capita* consumption of wheat especially in Europe.

As a result of pressure from low prices a Wheat Industry Assistance Act was passed in 1938 stabilizing the price of home-consumption flour wheat at 5/2d. a bushel. Funds from this Act were distributed among growers until 1947 when, with a rise in export prices, the excise on flour ceased. In all, over £13 million was distributed through this method besides another £3·3 million spent to eliminate the marginal producer. Whether this

[12] For example: that the United Kingdom should buy all export wheat for five years at a price of 4/9d. per bushel.

[13] Between 1927 and 1937 European imports fell one-third: by 1936 imports of China and Japan were only 60% of 1927/32 levels.

amount would have been large enough to rehabilitate the industry without the favourable influences of other factors—forthcoming between 1938 and 1947—is very doubtful.

Conditions arising from the outbreak of war in 1939 had two effects and altered the whole position of the industry. Firstly, as much of the European market was lost, the market area was restricted and, owing to the shortage of shipping, the United Kingdom Government preferred to purchase from stocks closer at hand in North America. Secondly, with "War-time Powers", the Commonwealth Government could legislate for control over wheat marketing without any fear of Constitutional invalidation.

As a result of these effects a Wheat Stabilization Plan was introduced in 1940 in which all wheat was guaranteed at 3/10d. a bushel,[14] and wheat-growers were licensed annually in respect to the acreage they could sow. With restriction of production the stabilized price was readily maintained, for with a fall in area sown of over 40% between 1939/40 and 1943/44 combined with an expanded local market, a far greater portion of the total crop was consumed internally. All the same, if the profitability of alternative farm activities, such as wool growing and fibre-crop production had not increased, and if labour and some materials had not become limiting productive resources, it is most unlikely that acreage would have been so readily reduced.

Moreover, production restriction, as we shall see in Chapter 10, is an inefficient process, and in any case an extraordinary technique for a rural exporting nation such as Australia to adopt.

Much of the reduction in Australian wheat production in the early war years resulted from a short-sighted policy which, if it had persisted, could have left a permanent scar on the wheat industry's productive efficiency. Following the rise of a Labour Government in 1941, and in view of the forthcoming elections in 1943, the Government felt the need for votes from small farmers: as a means of achieving this end they raised the returns of the small producer and reduced those of the larger—who were unlikely to vote Labour in any case. In the 1942/43 season the grower was guaranteed 4/- a bushel for the first 3,000 bushels of his production[15] and any amount in excess of this was paid on realizations. This practice incorporated a scheme advanced in May 1939 by a

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14 With provision that half of any export returns above the guaranteed price should be paid into a fund for subsequent use when price fell below the guaranteed level.

15 Equal to a rise of 11d. per bushel (f.o.r.) over the previous scheme.

certain Mr Robertson and the economic implications are obvious. In the first place it put a premium on inefficiency, for there was no reward to the large producer, who with optimum utilization of resources could produce at a lower cost. Secondly, it gave an incentive to the very small farmers who were producing less than 3,000 bushels to increase their high cost production to gain a maximum benefit; and thus increased the tendency towards continuous cropping and soil erosion.

Fortunately, this plan was altered in 1945 when growers were guaranteed 4/3d. a bushel (f.o.r.) for all wheat grown and, with a relaxation of production restriction combined with a lesser shortage of labour and machinery, the acreage sown increased in 1945/46 by 35% over the previous year.

The organization was again changed in 1948 when a five year plan placed both the internal and oversea marketing of wheat under one central authority—the Australian Wheat Board. Under this Act the Commonwealth guaranteed a minimum price which was based on production costs. The price of home-consumption bread wheat in Australia was equal to the guaranteed price (except in 1949/50) and although wheat for stock feed was at a similar rate until the 1951/52 season, in that year growers' returns from this wheat were raised to the International Wheat Agreement (I.W.A.) level of 16/1d. (except in Western Australia). However, to keep costs from rising too excessively in the dairying, pig and poultry industries, a subsidy was paid to keep the level of consumer stock feed wheat prices at less than the I.W.A. price. In this connection it is interesting to note that stock feed wheat prices, except in Western Australia, have been higher than for wheat used in human consumption.

Within the framework of the 1948 Act the guaranteed price was extended to wheat exports up to a maximum of 100,000,000 bushels in any one season, and a tax was imposed on exports (up to a maximum of 2/2d. a bushel) to establish a wheat stabilization fund—to stabilize price if the export price should fall below the guaranteed. Moreover, the Commonwealth Government agreed not to hold excessive amounts in the fund, and has, in fact, made distributions.

The I.W.A. has been superimposed upon this scheme and as the general principles of that plan are well-known, we need not repeat them here. The fundamental aim of the I.W.A. was to have a fairly stable price for most of the wheat sold internationally,

and variations in demand and supply were to be made effective through a marginal allocation of "free" wheat to each country.[16]

Recently, both the 1948 Australian Wheat Act and the I.W.A. of 1949 have come to an end, and at the time of writing, the wheat situation both within Australia and the international field is in a state of flux. Hence it should be profitable for us to consider these two agreements in relation to a desirable future plan.

International stabilized prices (within certain price limits, or better still, on an eight to ten season moving average system) are extremely beneficial to Australia; for not only does this type of arrangement help to mitigate undesirable fluctuations in the export income, but it assures growers of a relatively stable forward price for much of their output. However, in the post-war period the system in Australia (as in most other countries) has been far too complicated, for not only have there been many different prices, but the growers themselves have received payment in an extended series of advances spread over several years. As a result, except for the guaranteed minimum price, farmers have had no more idea than in the thirties of the actual price their wheat would fetch. Since payments for wheat in different seasons have been usually made several years after the harvesting of the wheat in question, these payments could not, rather naturally, affect the past production programmes, but instead influenced the planned output for the following season. Therefore, the techniques envisaged in the I.W.A. were not forthcoming and, instead of planning production to a forward price, production projects have been correlated with prices which reflected the situation of about two seasons before.

Rather, any agreements on the international terrain should be associated with domestic wheat schemes so that both plans may be co-ordinated. One of the basic reasons for an international agreement has been, that through restricting the fluctuations in price movements on "quota" wheat sales the induced changes in both wheat producers' and consumers' incomes would be less marked, and as a result, the "market-period" elasticities of supply and demand would be greater. In this connection, it will be remembered from our discussion in the opening pages of this chapter that price increases tend to be followed by reduced acreages, and expanded sowings follow price falls. Thus any international scheme which gave less extreme price and income changes could

[16] That such has not been effective has resulted chiefly through continued domestic policies in both importing and exporting countries which have worked against this.

give greater productive stability to the wheat industry. However, for any system to be effective, the "free" price should reflect marginal changes in the state of supply and demand so as to allow both producers and consumers (less important) to make alterations in their production or consumption. This implies, besides a successful "free" price,[17] that this price itself should be transferred directly to growers via their marginal production only.

We may conclude that, as part of a plan for getting the best of both worlds, the price of Australian home-consumption and export "quota" wheat should, if possible, be the same. Each grower should be apportioned an allocation of his production (in relation to a base-year and other refinements) to this market, and any other production (for stock feed and "free" exports) should be paid on realizations.[18] In this way not only would many of the fluctuations in world prices be assuaged and many of the evils—as apparent in the thirties—of the backward rising supply curve mitigated, but at the same time, variations in supply and demand could be transmitted to affect the grower's marginal output. All the same it should be noted that this type of scheme could only be successful if other countries (chiefly Canada and U.S.A.) adopted similar tactics.

We have said nothing about guaranteed prices which are tied to the cost of production in our suggestions: as such a system disregards basic supply and demand considerations, we too shall disregard such a scheme, but shall suggest an alternative solution in the last chapter of this work.

Before we pass on to the next chapter it should be of interest to study some recent changes within the wheat industry. As shown in the figure, although wheat acreage has fallen, both yield and total production have expanded. This result has derived from several sources, of which improved farm practices and the reversion of marginal areas to wool growing are the most important. This suggests that wheat-growers adopted the wrong technique in the thirties. Perhaps in this period a greater farm income would

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[17] i.e., one in which the "free" price is not unduly affected by "quota" price. To guarantee this requires not only that all important importers and exporters should be parties to any agreement, but furthermore, that guaranteed quantities should be distributed among importing countries in uniform proportion to their normal requirements and among exporters in proportion to their normal production.

[18] At the same time the Australian Wheat Board could refuse to purchase wheat from farms which State Departments of Agriculture (Soil Conservation Branches) declared "marginal".

have resulted from growing a lesser wheat acreage, having broader rotations in conjunction with pasture and animal production, and through the effects of increased soil fertility, a greater total wheat production could have been grown on a lesser area.

VARIATION IN AREA, YIELD AND PRODUCTION OF WHEAT IN AUSTRALIA: AVERAGE OF 5 YEARS ENDING 1938/39 AND 6 YEARS ENDING 1952/53

	5 Years Ending 1938/39	*6 Years Ending 1952/53*
Acreage (in millions)	12·9	10·1
Production (in m. bush.)	154	194
Yield (bush. per acre)	11·9	16·5

Source: Bureau of Agricultural Economics, Canberra.

CHAPTER 4

The Meat Industry

ALTHOUGH Australian meat production and exports include many types, the most important of these are beef and veal, mutton and lamb, and pigmeats; and since they are to varying degrees by-products of other production, the supply of the different meats may alter following changes in the price of associated commodities. For example, the profitability of dairying influences the number of dairy cows kept and indirectly the supply of beef and veal. Or again, when wool prices rise relative to other rural products, farmers retain more of their young cull sheep in the short run and mutton supplies fall; while in a longer period, with the resulting increase in sheep numbers, the production of mutton expands—although, in the latter case, most of the meat is of poorer quality and suitable only for canning.

There is also a relationship between the profitability of dairying and the production of pigmeats, and this may vary between short and longer durations. For instance, in a shorter period, when the profitability from dairying falls off, many dairy farmers turn to increased pig production (feeding extra grain) in attempts to keep profits intact. Or alternatively, with a long-term expansion in dairying, pig numbers may increase: in this case pigs are a by-product employed to utilize excesses of skimmed milk. Nevertheless, although some production is influenced by the price of complementary goods, total Australian meat production (with the exception of cast-for-age merino mutton) follows movements in profits between meat and other rural products. In fact, the production of beef (and veal) and pigmeats shows definite cycles with movements in real prices. Cyclical fluctuation of mutton and lamb production to changes in sheep meat prices are not so marked, for in this case total sheep numbers are influenced more strongly by wool prices.

As an example in this direction it is interesting to note that real prices of beef and veal move in ten to twelve year cycles in Australia. With a rise in the real price of cattle, farmers hold back more of their stock from sale for breeding purposes; the following

increase in cattle numbers reaches a peak from four to five years after the price increase (due to the long breeding and growth period); and maximum slaughterings occur two to three years after the increase in cattle numbers. Unfortunately for the producers, the expansion of slaughtering does not begin until six to eight years after the original motivating price increase, and the large numbers of cattle slaughtered at a totally different period usually reduce the real price severely. Farmers, as a result, move out of cattle production and within about six years the slaughterings are depressed—so the real price of cattle rises to start the cycle again. Indeed, in Australia as in many other countries, it seems that output should be raised when profits from the sale of the livestock concerned are falling to enable individual farmers to maximize profits.

Although much livestock production—for instance, cattle in Northern Australia—tends to be constant with variations in the relative price of rural products, a large portion of total Australian production is supplied by mixed farmers who are particularly sensitive to movements in comparative prices (this is especially so with fat lamb and pig production). As a result, the Australian production of most meats is heavily influenced, not only by the profits obtainable in producing complementary products (such as pig numbers to butter prices, or mutton production to wool prices) but also by the relative profits from the production of substitutable farm products.[1] Now the relative profits obtained from growing different farm products (which determine the amount of substitution on mixed farms towards or away from meat production) depend upon the level of production costs and prices for each substitutable commodity. We shall consider cost factors more in Part II but in this chapter we will examine some of the aspects which influence meat prices.

Apart from supply effects such as varying seasonal conditions, price is also influenced by changes in demand. Now the income

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[1] And of course, as we shall see in Part II, by relative prices and profits in non-rural sectors of the economy in the longer period. However, we are dealing essentially with changes in the productive process over a period of time in which there may be product substitution between farm products, and not in a period in which production has settled into long-term profit equilibrium in all sections of the economy (assuming that this is possible). All the same, the movements are not simple and it is difficult to express one process as short term compared with the other. Product substitution within the rural economy and between the rural and non-rural economy is usually concomitant in time—especially in periods of full employment.

elasticity of demand for all meats (considered as a whole) is not very high in the western world,[2] for although the demand for better cuts expands with income increments, this is offset by falling demand for the cheaper types of meat, and vice versa. In fact in the shorter periods, the variations in meat prices are influenced more by their price elasticities of demand, but compared with most rural products these are fairly high:[3] therefore movements in total market supply are absorbed without the greater changes in price found in other rural products like wool and wheat. However, as the price of farm products such as wool and wheat varies more, so the relative profitability of meat production (in the short run) changes with the price shifts of substitutable farm production.

If we generalize, we may say the demand for meat, unlike that for products such as wool, is not so affected by variations in consumer income, and that most of the change in supply is absorbed—and, this time, unlike wheat which tends to be an "inferior" product—by relatively small price changes. Price changes of rural products one against the other affect real meat profits more than changes in meat money prices and, for instance, when returns from meat are at a premium, livestock numbers increase. But the production process is long (especially for beef), and hence output changes which are instituted do not develop until a considerable time after the impact of the motivating influence. Thus the volume of meat tends to come on to the market in periodic highs and lows, and if the area of demand is not elastic, price and producer expectations vary in cycles.

The market area for Australian livestock production is made up of the domestic and export markets, and as export demand influences the domestic supply and prices (assuming a free price mechanism), variations in overseas sales may have a considerable effect upon the volume of meat production in Australia.[4]

The overseas market is significant not only because it largely

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[2] In U.S.A. 0·25 or less at retail. Theodore W. Schultz: *The Economic Organisation of Agriculture*, McGraw-Hill, 1953, p. 72.

[3] In U.S.A. price elasticity of demand for all meats appears to lie between 0·62 and 0·64 at retail level. At farm, price elasticity (1949) for beef cattle, mutton, lamb and pigs was 0·80 (Schultz, *ibid.*, pp. 189-190).

[4] Even this influence is at times obscured: for example, as far as fat lambs are concerned, the Australian domestic market will pay a higher price for a larger animal than the optimum export size, and this leads to difficulties in the price spread between export quality and domestic consumption lambs as the grower can usually maximize profits by producing for the latter market.

determines the margin of substitution towards or away from meat production on mixed farms, but also, inasmuch as it affects the absolute price level as well as the cycle, influences in the long run the amount of meat produced by specialist growers. The latter point is of particular importance when we consider the long-term possibilities of opening up new cattle country in Northern Australia or fat lamb production in high rainfall marginal lands. Therefore, we shall consider in some detail the growth and recent changes in the Australian meat export market, and analyse the probable effects of contemporary overseas marketing agreements upon total Australian production.

Since the First World War, increases in tariffs on meat have grown considerably in practically all traditional meat importing countries except the United Kingdom. The growth of protection was particularly severe in the period of the Great Depression (when tariffs in most importing countries other than the United Kingdom were at prohibitive levels), so along with a decline in the total volume of world trade in meat,[5] the absolute importance of the British market expanded. Australia was assured a portion of this market at the expense of non-Empire producers through the 1932 Ottawa Agreements: although in 1934, in attempts to expand domestic production, the British Government introduced quantity control of Empire meat and, where this was not effective, subsidized home producers to give them a margin of protection without rescinding the Imperial Preference deal.

None the less, the British trade retained its relative importance, and in the three years ending 1938/39, only 10% of the volume of Australian beef and veal exports were sold on other markets; while for mutton, lamb and pork all except 2% went to the United Kingdom. Although Imperial Preference gave Empire countries a more or less guaranteed portion of the British market at the expense of other exporters, at the same time it furthered a very severe restriction on sale to other areas. In other words, in a slightly different context, switches in British demand had little possibility of being offset by inverse changes on other markets and, through this, expectations concerning the potentialities of Australian meat production often changed severely and helped to restrict expansion of production by the more professional livestock growers.

Since the last war the percentage of meat exports sold to the

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[5] By 1934 exports of frozen beef were only two-thirds of the average of 1924/28 period—with Argentina bearing the greatest portion of the reduction. I.I.A.

United Kingdom has declined; for instance in 1950/51, 72% of Australian beef and veal exports were sold on that market; for mutton and lamb the quantity was 71%, and for pork, 67%. This is a much greater diversification when compared with pre-war days, and the advantage of an increasing export distribution of this nature lies in the possibility of reducing variations in profit expectations by spreading between countries any changes in supply and demand. Of course, because of the British meat shortage in the post-war period, this principle has been of minor importance; all variations in Australian production have been readily absorbed within the United Kingdom. All the same this point is becoming increasingly important: not only is supply catching up to British demand, but, as we shall see, we may expect ever-increasing fluctuations in the volume of Australian meat exports.

We have already inferred that any long-term increase in production by the more specialist livestock producer in Australia depends upon the absolute more than the cyclical relative meat prices. Now as the price obtainable for the export surplus of Australian meat production has a unique influence on the profits obtained from meat production, the Australian 1952 long-term contract with the United Kingdom has an important bearing on the probable future Australian output. In connection with these conditions we shall examine its economic implications in some detail. This will help us not only to gauge future meat production trends in Australia, but as exports of butter and cheese, dried fruits, eggs, copra and coconut oil (from Papua and New Guinea), and sugar are covered by similar contractual arrangements, also to conclude on the efficacy of such agreements.

The fifteen year meat agreement which is to run until 1967 relates to the marketing of beef and veal, mutton and lamb; it contains a detailed agreement for the immediate years and a general agreement—which is less precise—for the latter part of the period. That is to say, although the structural capacity is within limits for the next few years, in the more distant future it is, in general, a statement of agreed aims.

The intention of the long-term contract, as stated in the first paragraph of the general agreement, is threefold. Firstly, it is the aim of the two governments to develop further the production of meat in Australia; secondly, to increase the export of meat to the United Kingdom; and finally, to provide a satisfactory market in the United Kingdom for the whole of the export surplus during the period of the contract.

In a detailed agreement which covers the export of beef and veal until October 1958 and for lamb until June 1955, the price is based on the costs of production (although after the first three years a new schedule may reflect changes paid by the United Kingdom to other meat exporters), with the provision that the price should in no period be less than the schedule ruling in 1950/51. For mutton the principle varies somewhat inasmuch as the price of this meat is to be determined in relation to lamb prices. Within this interim, sales to countries outside the United Kingdom, British colonies and dependencies are limited (unless otherwise mutually agreed) to 3% of the contract export quantity.

The general agreement covers later periods in which new detailed agreements may be concluded, and in this duration (with a relaxation of restrictions on Australian exports to other destinations) the chief factor in determining future prices will be the price in the previous three years and the trend of world prices.

In the general agreement there is a clause which guarantees that if the Ministry of Food should cease to be the British meat importer, the United Kingdom Government will permit Australian meat exports to be sold on the British market without restriction; that a schedule of minimum prices will be fixed, and also, if necessary, that arrangements may be altered to reduce traders' margins and expand the portion of gross receipts payable to producers. These latter points may sound reassuring within the body of the agreement, but it is difficult in practice to understand how such a scheme could function. Under free market conditions current market price in the United Kingdom determines the price British meat importers are willing to pay, and should margins be cut on business with Australia, it is likely that traders would look for more profitable alternative supplies in other countries.

There may also be great difficulty in relating contract prices to "free" prices, for in this system as with the International Wheat Agreement, the contractual agreement affects the free price. If through a contract the world supply of free meat is very small, the unstabilizing price effects on this market may be acute. When meat is scarce, as in recent years, the free market prices will be high—much higher than without a contractual arrangement; and when there is a glut, prices are likely to be much lower than if there were only the free-price market mechanism. This point is especially appropriate in determining mutton and lamb prices as the free sales are very small; for instance, in 1950/51, the United Kingdom took 96% of the world imports and all but 1% of these were within

contracts. Under these conditions the free market price is no guide to fixing the guaranteed price, especially as parties to any agreement are likely to try to distort the free price to suit their own interests.

Although contract prices are related to the costs of production in the early years of the agreement, this only gives stable money incomes: the real incomes may be anywhere. Moreover, the contract does not consider the relative profitability from growing meat against other products, and as we have seen, this is very important in regard to total production. A rapid expansion of private investment in meat production in Northern Australia or other areas requires that the absolute level of profits (as against cyclical highs) must be above that obtainable in most other rural industry and non-rural activities—and, in any case, the Government must establish transport systems.[6]

In this connection, if the meat contract prices were at higher levels, more meat would be diverted abroad and meat prices in Australia would rise. However, as the Australian price elasticity of demand is probably around 0·75, this is of limited practicability since domestic price increases lower internal consumption fairly rapidly, and this in effect would depress the export market unless overseas demand were extremely strong. In any case it may not be politically or socially desirable for the Australian consumer to pay towards an increase in meat production. The solution is instead associated with transport development financed by overseas borrowing and a diversion of government expenditure from

[6] There are many difficulties concerned with an expansion of beef production in Northern Australia: the most important, besides breed and climate, is transport. From an economic angle, although meat production in these areas should be profitable when interest costs on transport capital investment are not involved, with the latter included, profits may be otherwise. Air freighting (at 22d. per ton mile as against 1·8d. to 2·5d. for railways—W. A. Beatie: *A Survey of the Beef Cattle Industry of Australia*, C.S.I.R.O.) is apparently too expensive for large scale development. If the capital costs of railway construction plus the high maintenance costs (through extreme destruction from periodic floods etc.) are compared with similar costs in road building and repair, the latter are probably much less. All the same, in regard to the long distances involved, the amount of expenditure must be high for any alternative (except perhaps for river transport in areas such as the Victoria River Downs). But since Australian meat production is not keeping pace with population growth; as exports aid the balance of payments; because the terms of trade are likely to turn in favour of meat in the long run: the expansion of transport facilities in this area appears to be warranted even without considering any political and social aspects.

hobbies such as the jet bomber industry. We may conclude that the long-term contract as it stands will not do much to expand Australian meat production and that the situation depends more upon government investment policy and the relative profits obtainable in alternative enterprise.

Nevertheless, as far as Australia is concerned, the long-term contract has several advantages. Not only does it assure a market for the export surplus, but it guarantees a forward price for an agreed period—usually a year. Although there is no absolute guarantee of year-to-year fluctuations being less than under the free market mechanism,[7] stability of rural export prices for even a year is a gain to both producers and consumers when it is realized that during the ten years ending 1938, the average season's highest price for Australian beef on the London market exceeded the lowest by 31%. For butter the variation within a season was 37%, and for mutton 34%.[8]

When we consider, however, the constantly changing pattern in the centres of world demand and, as we have seen with meat production, cycles in price and output if the area of demand is not elastic, bi-lateral agreements of this nature make for greater rigidity in market space and fluctuations of price (over longer periods) in market time. In agreements of this nature it would be much more desirable if Australian exports to markets other than the United Kingdom were of a certain quantity, and not as with the present meat agreement, restricted to a particular percentage. As we shall suggest at a later stage, we may expect the export margin of rural products other than wool (and wheat, to a lesser extent) to alternate considerably in future years, and if the margin for sale to non-British areas is restricted to a small percentage of total exports, the quantity variations from such an arrangement could be huge. This will restrict opportunities of obtaining assured new export markets (especially in Asia) which are as essential as a stable British trade for long term stability and an expanded output.

It is interesting to note how the volume and composition of Australian meat exports has changed since the thirties. In the three years ending 1952/53, as compared with the three immediate

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[7] Contract agreements restricting price changes in any one year do not appear to be functionable in practice. cf., the Danish-United Kingdom bacon contract and the New Zealand-United Kingdom meat contract.

[8] *Review of Marketing and Agricultural Economics*, June 1952, vol. 20, no. 12, p. 123.

pre-war years, the average exports of beef have fallen 44%, those of mutton 18%, lamb 69%, while for canned meat—which is an inferior product—there has been a twelvefold increase. Several factors (besides the high wool prices, which have encouraged growers to hold sheep until they are only fit for canning) have influenced this unfortunate distortion away from the exportation of high quality meats.

Firstly, the rigorous price control on meat during and after the war restricted growers' returns, and in association with factors including the shortage of materials and labour, has led to a restriction of investment within the industry. Secondly, as the meat trade has been a sellers' market since 1939, the spread between better and inferior types has narrowed and retarded the production of high quality meats. Thirdly, during and immediately after the war much meat, which could have had alternative use, was canned to save shipping space—but this scarcely applies nowadays. Fourthly, a large portion of the reduction in exports has resulted from an increased total consumption in Australia. In 1952/53, although domestic *per capita* beef consumption was 14% below the pre-war average, the expanded population more than offset this movement and, in the two years ending June 1953, internal beef consumption was 10% above pre-war levels. Australian domestic consumption of mutton has fallen in total volume as well as *per capita* since pre-war (and thus made more inferior types available for canning), but *per capita* consumption of lamb has increased 60%;[9] and total Australian consumption has doubled.

Finally, Australian livestock production and exports, as with other rural output, have been influenced by the changing cost structure and prices obtainable in other sections of the economy. But we shall analyse these effects more fully in Part II.

We have not considered pigmeat production to any extent as this is of minor importance to the Australian balance of trade. Since pig raising is usually combined with dairying, and as both are often sideline enterprises, changes in output of the former industry tend to be correlated with the latter. We will consider the dairy industry in the next chapter and we can safely assume pig production has a similar fate.

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[9] Taking *per capita* consumption in 1951/52 as the level. This was 24 lbs per head but shows a decline from the high of 28 lb. in 1948/49.

CHAPTER 5

The Dairy Industry

In Australia the dairy industry is made up of two distinct types of producers. Firstly, there is the commercial dairy farmer, who, through ideal climatic and soil conditions or proximity to fresh milk consumption areas, finds dairying relatively profitable with most variations in costs and prices. This farmer often receives a price advantage through a quasi-monopoly right to sell all his output in the more remunerative fresh milk consumption market. Moreover, as his farm is usually specifically organized for dairying, price changes of alternative rural products do not, as with our second type of farmer, readily cause shifts into and out of dairy farming.

The other class of dairy farmer (situated farther from cities or on more marginal land) is the man who keeps more cows when the prices of other rural products such as wheat and fat lambs are low. This mixed farmer alters production programmes when relative profits between different rural products change, and as a large portion of Australian dairy produce comes from this type of farm, total Australian output varies with the profits obtained in alternative activities. However, as we shall see in Chapter 8, because the Australian protectionist policy has raised the total costs[1] of dairy production considerably more than most other rural enterprises, the expansion of the dairying industry has not, except in the period of the Great Depression, kept pace either with output increases in most other rural industries or with Australian domestic consumption.

Owing to these effects, and in attempts to maintain total dairy production and the incomes of dairy farmers, various marketing schemes have been introduced in recent decades. Up to 1926 the

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[1] *Ad valorem* tariff rates on dairy equipment include:

Type of machinery	*British Pref.*	*Other Rates*
Cream separators	free	12½%
Milking machines	5%	27½%
Pasteurizing butter and cheese factory equip.•	15%	35%

• Excluding New Zealand.

industry was largely able to stand on its own feet, for as the protection policy had not been particularly excessive, dairy labour and machinery costs were such that the industry was able to maintain its position without much organized assistance. But with the large increases in tariff rates after the First World War, dairying became more and more unprofitable and, to preserve the industry and save the farmers, the so-called "Paterson Plan" was introduced in 1926. Under this scheme (which was implemented by voluntary agreement) each butter factory paid a levy of so much a pound on its output into a fund which was used to pay a bounty on all exports. This raised the Australian consumption price by the amount of the levy and, as exports were subsidized, increased the quantity sold abroad.

The economic and welfare weaknesses of this type of scheme are considerable: economically it is unstable, for increased prices (relative to other farm products) increase production, and as this leads to a greater volume of exports, the same rate of export subsidy per pound of exports cannot be maintained without an increase in the tax on that portion of the total output consumed in the domestic market. In other words, if the programme effectively raises profits in dairying and output expands, the tax on home consumption and total consumer outlay must keep increasing for profit margins to be kept constant. Moreover, and just as important, the Australian consumer with this system is forced to subsidize exports; and this is a most inefficient method of increasing the returns to dairy farmers as a large portion of the consumer subsidy is, in effect, donated to overseas purchasers of Australian butter. Unfortunately, the evils of this type of subsidization do not end here, but we will consider the various consequences of marketing schemes more fully in Chapter 10.

Nevertheless, for all its faults the "Paterson Plan" probably raised the returns of dairy farmers somewhat, and this factor, combined with falling prices of alternative rural products, led to an increase in the number of cows milked in the late twenties and early thirties. In periods of depression the farm family cannot earn money in occupations away from the farm (as there is general unemployment), and in preference to earning nothing, the energies of farm labour are directed towards gaining all possible cash income from sideline production. As a result, dairy farming expands on mixed farms when the prices of wheat and other substitutable products are low. In fact, the number of cows milked

increased nearly 40% in the seven years ending 1936 and this expansion reflects how desperately farmers needed cash at that time: although the price of butter fat was not high, a monthly cream cheque gave a steady, if small, cash income. In 1936 the importance of sideline income fell with rising wheat prices, and the increase in dairy cow numbers was quickly arrested. However, by 1938, wheat prices had fallen once again, and since Australian unemployment levels were even then around 10%, opportunities for ready employment off farms were scarce so family farm labour turned once again to producing more cream or milk as a method of maximizing farm incomes.

In 1934 the "Paterson Plan" was superseded by a new compulsory price equalization scheme. The administrative weakness of the voluntary 1926 scheme was that it depended upon the loyal adherence of butter factories and this was sometimes difficult, for any factory not joining the project was able to sell all its output on the higher-priced Australian market without making any contributions towards export subsidization. Largely to overcome these handicaps the 1934 equalization scheme was introduced, and although the method of increasing domestic butter prices was slightly different[2] from the "Paterson Plan", the net effects were much the same. Nevertheless, the authority for legal compulsion was short-lived as the Commonwealth Acts concerning this scheme were shown to be unconstitutional in 1936. After that the scheme survived, like its predecessor, by voluntary agreements with the butter factories.

With the outbreak of war the situation within the dairy industry quickly changed. Unemployment gave way to full employment and, with alternative jobs, many farm workers who had previously tended cows (which most disliked) went into munition factories or joined the forces. Rural entrepreneurs had to pay heavily increased real wages to arrest the movement of labour into readily available and well paid alternative jobs; and moreover, as dairy farming labour costs are a large portion of total costs, profits from this form of rural activity fell relatively rapidly. At the same

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2 Through legislation restricting the total output of each butter factory which could be sold on the Australian market to a particular percentage. The rest had to be dumped abroad (or, alternatively, the difference between export price and domestic price paid into an equalization fund if exports less than the prescribed amount, and a similar receipt from the equalization fund if exports exceeded the prescribed amount).

time prices of other farm products tended to rise more, and in the circumstances mixed farmers turned to producing those alternatives which gave the greatest receipts from the least expenditure of labour.

With the arrival of American troops in Australia and the cessation of supplies to Britain from Continental Europe, demands for Australian butter quickly expanded. In 1942, in an attempt to increase production without raising the domestic consumer price, realizations of the industry were supplemented by a direct Commonwealth subsidy. However, the net effect of this increased assistance was merely to retard the movement away from dairy farming, for not only had the price of alternative products risen, but dairy farmers experienced acute operational difficulties: it was practically impossible to buy new machinery, and labour was hard to obtain, expensive, and often inexperienced. In fact, considering the frustrations and difficulties experienced in this period, it is probable that output would have fallen more if many dairy farmers had not found it easy to avoid paying income tax on their cream cheques.

In 1947 the dairying industry was reorganized under a new five year scheme in which all States participated. The Commonwealth subsidy was retained to keep domestic butter prices at a low level and farmers' selling price was regulated in regard to costs of production. It was intended that the scheme should be self-supporting; for with export prices in excess of the guaranteed levels, the surplus was paid into a stabilization fund, and when export prices were less than the guaranteed levels, the difference to the producers was to be financed by drawing on the fund. This part of the plan worked well enough in the five years from 1947 as the export prices invariably exceeded the guaranteed levels, but with the return of price control to the States, the Commonwealth ran into some financial embarrassment. When the five year plan was introduced in 1947, the purpose of the butter subsidy was to keep consumer price low, as much as to raise producers' incomes, and with increased production costs, butter prices were raised but kept below "normal" levels by the constant subsidy payment of 6d. to 7d. per lb. After the defeat in the Prices Referendum the Commonwealth transferred price control to the States, and the States, being clever, froze the price of butter. Domestic butter prices remained at 2/2d. per lb. from July 1948 to August 1951 and, as a result, the Commonwealth was left paying a greater

subsidy with increased production costs. By 1951 the Commonwealth subsidy was 1/1½d. for every pound of butter consumed in Australia. However, in a new stabilization scheme which came into operation in 1952, the amount of Commonwealth subsidy was maximized at 1/1½d. per lb.; and with increases in production costs, retail prices have risen in proportion.

In the post-war years the importance of dairy products as major export commodities has sadly declined. For instance, exports of butter in 1951/52 were only 13% of the average volume exported during 1935/39,[3] and this is the only Australian dairy export likely to be of long-term importance. The quantity of Australian cheese is extremely low in comparison to European types; while for powdered milk and associated products, the future is not bright when the expansion of dairying in industrial countries (tariff protected) is considered.

Besides the influences of lower than "normal" domestic butter prices and an expanded population, two other factors have led to a reduction in the volume of exports.

Firstly, and quite desirably, Australians are drinking more milk and eating more cheese than in pre-war and earlier days. This has led, in the last twenty years, to a decreasing amount of milk being available for butter manufacture and for export; for example, in 1929/30, 77% of Australian milk production was used for butter manufacture: in 1953/54 the proportion had fallen to 63%.

Secondly, and extending beyond this influence, is the fact that margarine production in Australia is restricted by law to 9,200 tons per year (butter consumption being 115,000 tons per annum). Not only has it been difficult for consumers to obtain this product but the quantitative restrictions themselves have effectively inhibited any movement towards producing a better margarine product. Also, with consumer butter prices excessively subsidized in several post-war years, there was little or no reason to purchase an inferior product. For instance, in 1950/51, Australian retail butter price was 2/2d. and margarine sold at 2/1d. per lb. Of course, this absurd restriction on the production of margarine should be lifted immediately; for not only is it of doubtful efficacy to the dairy industry, but at the same time, it restricts the growth of Australian whaling and vegetable oil enterprises.

Still, this is only one small point, and in fact, the problem of rehabilitating the dairy industry goes back far beyond the

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[3] In 1953/54 exports rose to 41% of the 1935/39 average.

present Commonwealth marketing legislation. Unfortunately, under the existing marketing system, unless anything unforeseen happens, Australian dairy production will continue to fall and, in a few years, Australia will become a butter importer.

Although varying sale prices with changing production costs give dairy farmers constant money incomes, this type of scheme can never lead to an increase in the output of dairy products so long as it remains more profitable for farmers to grow other products. If the output of dairy products is to expand within this system, the returns to dairying must be at a level sufficient to allow the industry to have a comparative advantage in profits, or alternatively, the receipts from substitutable production must, as with the dairy industry, be controlled. This process would entail the socialization of all Australian rural activities. Indeed, the main trouble with the socialization of a particular industry is that it demands a similar fate for associated activities.

However, this growth of Federal power and control can be readily prevented, and the dairy industry largely rehabilitated from its present unfortunate position by removing the cause of the trouble. We shall see as we progress what these activating disabilities to the dairy industry are: how government policy has suffocated one of Australia's most prosperous industries, and this is doubly important, not only because it has led to a decline in a naturally efficient enterprise, but because it gives an example of the difficulties likely to be experienced by much more of Australian rural production if the present policy is followed without heed and without thought.

Moreover, the present policy will not readily cause an expansion in the most efficient types of dairy farms. To guarantee prices and to raise them temporarily (e.g. for five year intervals) will, at the most, lead only to increased substitution to cows on mixed farms. Good dairy herds and efficient productive methods are only found on farms where the greater part of total income is from dairy products. To achieve an expansion of this much more desirable branch of the dairy industry costs must come down, and in view of the time it takes to expand dairy production and the capital investment necessary, farmers must have long-term confidence in the industry if a spontaneous increase in efficient production is to occur.

From our assumptions about the growth of dairying on mixed farms in periods of unemployment (depression), and since full

employment will in all probability be the rule rather than the exception in the future, it follows that output is unlikely to increase as rapidly and remarkably as in the early thirties if alternative product prices should fall. If full employment is maintained mixed farm surplus labour will go to other occupations and sideline dairying will not expand with falling rural prices. In view of this consideration it is logical that output expansion of the Australian dairy industry rests even more with the specialized dairy farmer.

PART II

The Effects of Government Policy on Rural and Other Production

CHAPTER 6

Changing Input Costs and Product Prices

BEFORE we consider the manner in which government policy may affect the volume of rural and other Australian production, it is necessary to understand the movements of productive resources (inputs) which follow changed relative profits between rural and other enterprise. As profits from producing goods or services are the residual between total costs and receipts, any alteration in either the costs of production or the selling price of the product may influence the level. Hence it will be necessary for us, in attempts to estimate the probable alterations in the volume of production between rural and other industry, to investigate the effects of both changed input costs and product prices.

At the same time, however, we must distinguish between variations in the volume of rural production which follow immediately after an alteration in profit margins, and the deviations which may result in a greater duration of time. For instance, in a period of a few years—as has been suggested in Part I—farmers and graziers may increase the amount they produce with falling profits, but as we will see, this is not so over a longer spell of time. Thus we will examine both the short and longer term influences in this chapter.

Largely because non-rural production does not show a tendency towards a short-term increase in output with falling prices and vice versa, if we make a review of total Australian production, then national output varies directly with the level of profits. In other words—for the whole economy—if product prices should decline relative to input costs, profitability declines and output will contract; and alternatively, with an increase in product prices to input costs, output expands. We must remember, however, that although the demand for productive inputs rises and falls with the ups and downs in profits, as the elasticity of supply for each type of resource used in production may vary with prevailing economic conditions, the change in price of inputs to a given change in demand depends upon the elasticity of supply for the input concerned at the time in question. For our purposes we may conveniently divide rural productive inputs into land, labour and capital; and as an aid to distinguishing the induced effects of

a switch in profits between our industries, we will consider each of these three inputs in turn.

Land, through its inherent characteristics, occupies a unique position compared with the other rural productive inputs. Firstly, as the physical quantity available for use cannot be rapidly altered like capital (machinery etc.) switches in demand cannot be offset by changes in supply. Secondly, as the use of land outside the rural industry is restricted to building sites or transport facilities, when the demand for land alters in the rural section of the economy, it cannot, like labour, be readily supplied from, or made available to, non-rural users. Therefore with a fall in demand which follows declining rural profits, land supply has a very low elasticity for there is a lack of alternative productive use outside agriculture; and indeed, in a period of a year or so, the elasticity is near zero. When the demand for land increases following a rural profit rise, the elasticity is not so low in countries like Australia as small additions in the physical quantity available are obtainable from marginal areas and virgin lands.

Unlike land, labour is much more readily substitutable between rural and other occupations and, in fact, the elasticity of rural labour supply varies with employment levels in non-rural sections of the economy. With high levels of labour demand outside rural industry, the opportunities for jobs away from farms for rural workers expand; while with general unemployment in secondary and tertiary industries, alternative occupation for farm workers is restricted, and rather than be totally unemployed, rural labour is willing to accept the alternative of lower real wages. This means that in depression periods real wages for rural occupation fall without much change in the numbers employed, while in other parts of the economy real wages tend to remain constant although employment levels decline. Thus when general unemployment occurs, the supply of rural labour is extremely inelastic, regardless of relative real wage rates. Alternatively, with increasing levels of employment in non-rural occupation, the elasticity of rural labour supply becomes greater with the availability of alternative jobs away from farms and is, in actuality, influenced to an increasing degree by the relationship between real wages in and out of rural occupation. In Australia, as the level of employment for the whole economy is largely associated with the conditions of rural export prices, we find rural labour costs vary directly with rural profits (although there is a time lag for changes in labour costs, especially following falling prices).

As with both land and labour inputs, the supply of rural capital is extremely inelastic with falling profits, since farm machinery and fixed improvements (other than cars and trucks) have no alternative use outside agriculture. With an upward movement of rural profits, both because new investment is considered profitable and machinery is substituted for labour (rural real wage rates rise relatively rapidly with increasing product prices), the elasticity of capital supply increases.

With these basic principles in mind we are now in a position to analyse the effects of changes in profits between rural and other industry and we shall consider three examples. In the first instance we shall examine the consequences of a relative profit fall within rural industry in periods of general unemployment (which, of course, corresponds to depression); secondly, we will investigate the effects of a relative profit rise for rural industry with full employment (this being equivalent to a boom), and lastly, the conditions necessary to maintain the volume of output between rural and other sections of the economy in constant ratio. Not only will these three examples help us to understand the productive process, but at the same time they will act as a guide to the effects of government policy which will form the subject matter of the next four chapters.

In periods such as the Great Depression, when general unemployment exists and rural product prices decline relative to non-rural, the conditions of land, labour and capital input supply—as the above outline suggests—are extremely inelastic. Thus with falling demand and very constant supply, land rents (prices), real wage rates and capital purchases all decline. Actually there is reason to believe input costs fall in proportion to the absolute decline in rural product prices; this happened in the United States during the depression,[1] and there is no reason why the trend in

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[1] PRICES RECEIVED, WAGES AND GROSS RENT PAID; U.S.A. 1929 to 1933. Base: 1929 = 100

Year	*Prices Received*	*Wages Paid*	*Gross Rent Paid*
1929	100	100	100
1930	86	88	81
1931	60	66	56
1932	46	45	41
1933	48	40	49

Source: D. Gale Johnson, "The Nature of the Supply Function for Agricultural Products", *The American Economic Review*, vol. xl, no. 4, September 1950.

Australia should be different in similar periods. Thus with an equal fall in product prices and input costs, no profit advantage accrues to individual farmers from producing a lesser amount and, as a result, there is no movement of productive resources out of rural occupation.[2] Moreover, interest charges and some taxes (e.g. land) are fixed in terms of money, so increasingly greater portions of total farm income are expended on these fixed amounts (an equal decline in input costs and product prices gives an equal fall in unit profits). In attempts to cover charges of this nature and to preserve farm income, a short-term expansion of rural production usually results when rural product prices are low.

In the long run the situation is quite different. If, through spontaneous causes or the consequences of government policy, profits in the rural industry are permanently depressed compared with the rest of the economy, constant lower profits in the former will restrict the main body of new investment to the latter; and with a relative expansion in non-rural industry, labour in rural areas becomes redundant (accelerated by any introduction of labour-saving techniques), while demand slowly increases elsewhere. Non-rural industry offers higher real wages to obtain a larger labour force and workers move out of farming areas to receive the greater reward—this movement being slow with general unemployment and becoming more rapid as the level of employment rises. Although land values and rents fall in the long run (as in the shorter period) with decreasing rural profits and investment demand, as labour input costs (owing to employment opportunities in other industries) and capital input costs (being supplied by other industries)[3] cannot fall by such a degree over the years, only land costs tend to fall by the amount of the original rural profit decline. Furthermore, as we shall see in Chapter 8, it is usually impossible for the price of land to fall sufficiently to equalize total production costs at a new level which is appropriate to the absolute decline in product prices. In other words, in the long run, rural product prices fall more than input costs (as a

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2 As farmers do not know the course of future prices and, as they have few liquid assets, they do not store grain during a depression; therefore grain prices fall, and pig and poultry production—which are dependent upon grain as an input—remain unchanged. If through government policy grain prices are maintained at relatively high levels, pig and poultry production fall.

3 Over an extended period of time farmers are unable to reduce machinery and fixed improvement costs—as they do in a few years of depression—for capital wears out or becomes obsolete.

whole). As a result marginal producers are forced out of business, or alternatively, a land boom subsides and the area of land used increases more slowly or remains constant.[4]

In our second example we assume the opposite conditions: that is, an increase in relative rural profits in periods of full employment. In this case, if we presuppose that rural enterprise is now the most profitable form of business, an increase of input employment and output will result in the long run. In a shorter period, however, greater profits may lead to a reduction in output on established family farms as the family may substitute leisure for work. Nevertheless, over a period of time, as labour-saving machinery is increasingly substituted for labour if the boom lasts several years (labour costs increasing more rapidly than capital costs), the net effect of any reduced labour exertion on family farms is not so important. In fact, with an expansion of capital employment in place of labour, total rural output may well expand although the rural labour force may not do likewise.

As is well known, rural enterprise is subject to diminishing returns,[5] so large increases in the volume of production can only be obtained with an expansion in the physical volume of land. If unimproved land is available—as in Australia—this long-term output expansion will take place if the profits obtained from investment in rural activities are somewhat higher than those obtainable in other sections of the economy.[6] Thus we find that an increase in relative rural profits has little effect on increasing output on established farms (discounting expansion due to technological improvements), but in the longer period when the area of land employed in rural activities expands, large increases in production may result.

The conclusions in relation to our third example should be obvious from our previous discussiion. If the proportion of total rural production to national production is to be constant, the profits obtainable from the employment of productive inputs in and out of rural enterprise need to remain at levels appropriate to long-term equilibrium. Therefore, if product prices or input costs are

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[4] Whether rural output decreases, remains constant, or increases more slowly with a switch of relative profits against rural industry, depends on the original relative profitabilities and the degree of profit change.

[5] That is, an increase in inputs on a given area of land does not give proportionate increases in production after a certain output is obtained.

[6] High income tax on large incomes without a tax on capital gains has a similar influence as has been demonstrated in Australia in recent years.

altered, they must change in a manner which allows the profits from input employment (or their sum to produce a unit of output) to remain constant in the various parts of the economy.[7]

Since input costs and product prices may be changed in different sections of any economy by appropriate government policy, it follows from the above analysis that it is possible to alter the whole face of the productive capacity away from uninhibited *laissez-faire* levels. This has been done in Australia. We shall now examine the various ways in which government policy can and has changed the productive pattern of the economy. As the chief policies which alter the balance of output between rural and other industries are usually expressed in the form of exchange rates, tariffs (and variants), Imperial Preference and marketing, we will consider each of these methods in turn.

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[7] Assuming equal technological change in rural and other industry. As this is valid in a shorter period, in our analysis the effects of improved technology will be disregarded. However, it may be noted that as imperfect competition exists in non-rural industry, the entrepreneur is often able to choose between the adoption of a new technique and its postponement without distorting existing profit margins. With the competitive structure of the rural business unit this is not possible as farmers who delay in introducing a new technique experience reduced profits. Public funds appropriated to agricultural and pastoral research benefit the consumer in the long run, for as all the industry (outside Australia as well as within) takes up the improved methods, more or better is produced for the same amount of input employment. Price will fall with increased supply (assuming consumer income and population do not increase) and as the price elasticity of demand for rural products is inelastic, rural income declines. Only those producers who first introduced the new technique gain an ephemeral benefit, and rural income remains depressed until the redundant productive resources move to other enterprise.

CHAPTER 7

Exchange Rate Effects

As input costs and product prices in various sections of the Australian economy may be altered through adjustments in the exchange rate, it follows from our discussion in the last chapter that switches in foreign currency prices may change the national productive pattern. Actually, to estimate the relative changes in output which may follow alterations in input costs and product prices, we must reorganize our industries in a manner suitable to take cognizance of the fact that Australia is a nation engaged in international trade. In the new classification we should talk of Australian production as being of three types: the export, import-competing and home-trade industries.

However, as Australian overseas trade is concerned basically with the export of rural products and the import of manufactured goods, the change in terminology does not require much alteration in our method of expression. The export industry is, in essentials, the rural industry (except for some primary extractive mineral products), while the import-competing industry is a substantial part of the Australian manufacturing fabric. The home-trade industry is rather different. Products from this part of the economy do not enter international trade as they are either goods which are bulky in relation to value, perishables, or services of one kind and another. All the same, the home-trade industry does not consist of a hard and fast collection of product types or services. For example, there has been a tendency for some home-trade products to change to import-competing when their price has risen sufficiently for similar goods to be imported at competitive levels regardless of high freight and other charges.

Coal, for instance, was once an important export; later a home-trade product; and in recent years, to some extent, an import-competing product.[1] Since the most important home-trade

[1] If the home-trade product concerned is produced under monopolistic conditions, unless input costs increase or tariff protection is granted, the limit of monopoly output restriction may be assumed to be around the price at which a home-trade product becomes import-competing (where possible).

products are usually complementary inputs to production and investment in other industry, and because they do not by their nature enter international trade, exchange rate adjustments have little immediate effect upon this industry. In other words, although changes in exchange rates may conceivably affect some home-trade production on the fringe of price substitution to either import-competing or export production, most influences will act through any residual changes in Australian domestic investment and employment (Chapter 8).

We will return to consider the home-trade industry in greater detail in the next chapter but will, in the meantime, appraise the induced effects of three changes in exchange rates at different stages in the economic climate. Firstly, we will examine the probable influences on relative domestic production and on the balance of trade of a depreciation of the Australian pound when unemployment is prevalent in the most important trading nations. Then we will investigate a depreciation under conditions of full employment in the world's most important trading countries; and lastly, as there have been suggestions of an appreciation of the Australian pound in recent years, the outcome of such a policy.

To be in a position to assess the consequences of any alteration in the rate of exchange we must not only examine the probable changes in price which may result for the various imports and exports, but at the same time investigate the likely changes in the quantity demanded following the initial alterations in price. The latter point is essential, not only to establish the eventual influences on the balance of trade, but also to gauge the subsequent effects on the detail of the Australian productive pattern. Therefore we will consider in each of our examples four elasticities: those of foreign supply and domestic demand for imports; and in relation to exports, the elasticities of Australian supply and foreign demand. In this way we will be able to suggest the probable changes in value (quantity x price) of both imports and exports in our three examples. At each instance in the following discussion—to avoid confusion—we must assume that quantitative controls over imports and exports are non-existent and that Australian *ad valorem* tariff rates remain constant. As specific duties are relatively unimportant this gives an equal percentage variation in the Australian landed price with a given percentage change in c.i.f. import prices which follows an alteration in exchange rates. Although a policy of constant tariff rates with switches in the international price of Australian currency is unlikely in practice, it allows us to judge

the consequences of exchange adjustments without unnecessary complications. Later, after we have considered the effects of tariffs in the next chapter, it will be possible to estimate the results from any concomitant switch in exchange and tariff rates.

In our first example we postulate a devaluation when considerable unemployment exists in the trading nations of the world: these conditions approximate to those existing at the time of the Australian devaluation against sterling in the early thirties. As Australia imports a large portion of the output of much British industry, and because it is difficult to expand sales in other countries when large scale unemployment is widespread, a sudden devaluation of Australian currency in these periods is likely to elicit a fall in the sterling price of some United Kingdom exports. Although depreciation reduces the quantity of British goods purchased through the impact effect of higher Australian prices, several factors make it unlikely that the sterling price will fall by the ratio of the exchange shift—to keep landed prices of British exports constant. Firstly, supply of some British exports is elastic even in the short run, as the amount produced can be adapted quickly to changed demand: secondly, some imports of British goods are not a large portion of total United Kingdom production and therefore changed Australian consumption has little effect on total demand. Then lastly, some imported British goods have an elastic demand in other areas. In fact, we may assume that with a 10% depreciation the price rise of United Kingdom goods would be three-quarters of this amount in Australian money.

About one half of total Australian imports are of non-British origin, but as Australian consumption is only a small portion of the total output of any of these countries, a reduction of imports would not affect the supply price materially. We can consider the landed supply price of goods from countries other than the United Kingdom to vary proportionately with the ratio of depreciation.

If these assumptions are valid, a 10% depreciation causes the landed supply price of imports (considered as a whole) to fall just over 1% in foreign currency (i.e. non-Australian) and to rise nearly 9% in Australian currency.

Now any alteration in the total value of imports will also depend upon the size of the reduction in volume imported with higher domestic prices. As shown in Figure 3 on page 80, when unemployed resources exist in Australia the price elasticity of demand

for imports lies around 1·1. If we suppose there is no consumption substitution of British products for imports from other countries, then the conditions of import supply and domestic demand as suggested above give, with a 10% devaluation, a decline of 2% in

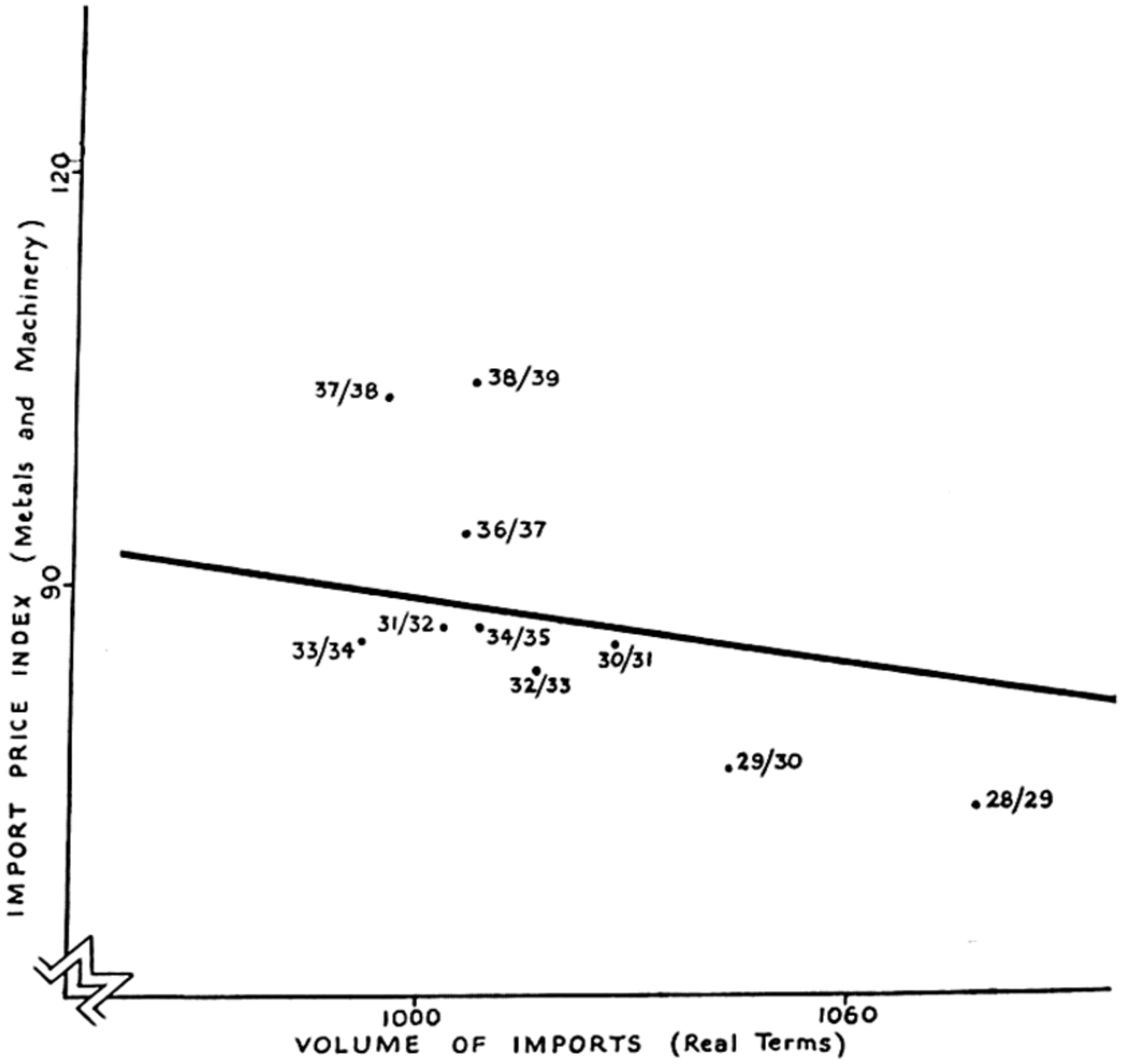

FIGURE 3

AUSTRALIA: PRICE ELASTICITY OF DEMAND FOR IMPORTS WITH UNEMPLOYMENT.

NOTE: It is impossible to establish a statistical curve for the price elasticity of demand for imports in the post-war era due to the violent changes in price and volume of imports which have occurred and the small number of years which can be used. As alternative Australian products are not necessarily available in these periods (full employment), price plays a much lesser part in influencing the volume imported than when inventories of both import-competing products and imports are high. It may be assumed a rise in price would reduce imports somewhat and vice versa, but due to the lack of substitution choice between domestic and overseas goods, the price elasticity would be severely inelastic. (In Figure 3 the influence of income has been removed by statistical methods and in Figure 4 the effects of price have been similarly subtracted.)

the value of imports in Australian money and 11% in foreign currency. Nevertheless, we must remember that as the price of imports rises relative to Australian internal production, allowance must be made for an increasing substitution of domestic for overseas products. In all, the total value of imports may decline 15% or more in foreign money.[2]

To gain a complete picture of the effects of devaluation (in periods of unemployment) on the balance of trade and production, we must now turn to consider the probable consequences on the other side of the scales: that is, to judge any changes which are likely to be evoked in the value of exports.

As the marginal reduction in Australian imports following a devaluation is not a large part of the total production of any exporting nation (including the U.K.), such a policy will not severely depress the national income in any of these countries; thus we may conclude there is no induced reduction in demand for Australian exports. In fact, we shall suppose overseas national income is constant both before and after the Australian depreciation.

Because prices of Australian non-wool exports are set in external markets—or by long-term contracts and international agreements—the f.o.b. price of these exports will remain constant in foreign money: that is, rise in Australian currency by the ratio of the depreciation.

We cannot be so dogmatic about wool. Not only is Australia the world's biggest supplier of apparel wools, but practically all domestic production is sold at internal auction sales in Australian currency; hence the immediate development is to lower wool prices in foreign currency by the degree of the devaluation, and this is especially apparent if exchange adjustments should occur during the selling season. Moreover, there is reason to believe that the foreign currency price of Australian wool would not return to parity with pre-devaluation prices, and consequently any increase in Australian price would not equal the ratio of the depreciation.

Several factors lead to this conclusion. Firstly, as we have seen in Chapter 2, raw wool prices have little effect on the quantity

[2] Since some imports do not actually compete with domestic production, and as they are often essential to the functioning of the economy, it is difficult to reduce imports below a certain minimum. This is shown in Figure 4 and suggests, when this basic import level is reached, there is a definite limit to the use of devaluation or tariffs as a method of reducing the value of imports.

demanded; secondly, wool buyers appear to be in a stronger monopoly position than selling brokers in the auction room and are able to exert this greater influence to hold wool prices (in Australian currency) near the levels existing before the devaluation. Lastly, and associated somewhat with the second consideration, is the different attitude towards holding stocks by growers (or selling brokers) and manufacturers. As growers sell, no matter

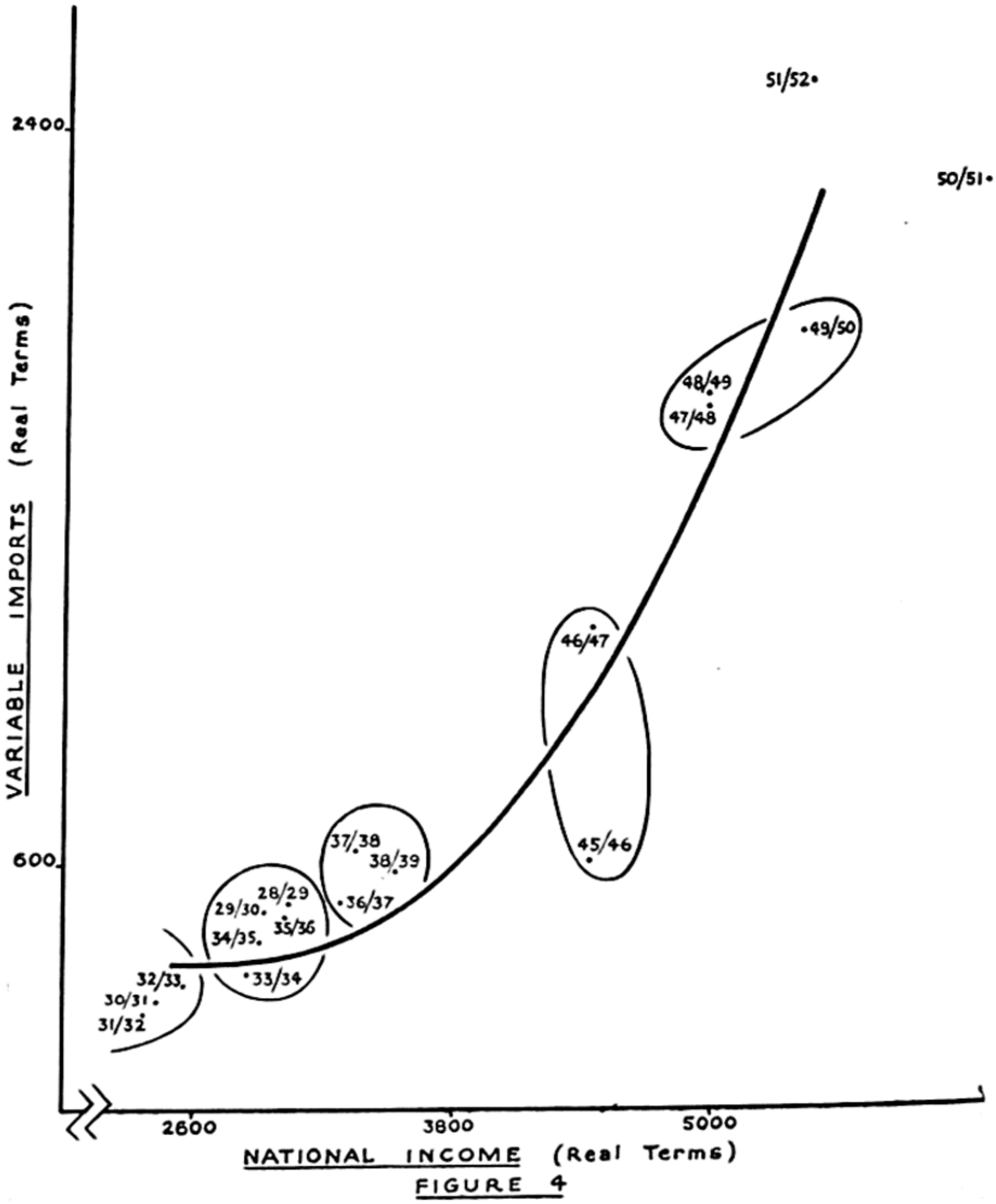

FIGURE 4

AUSTRALIA: AVERAGE PROPENSITY TO IMPORT.

what the price, and as manufacturers usually hold stocks and can postpone purchases for a few months, the very short period elasticity of wool supply is probably much lower than that of demand: in fact, the elasticity of the latter could be infinite over a month or two. Consequently, as manufacturers can delay in purchasing a continuing supply, the force of any bargaining is thrown on the buying side. In combination the three factors make it relatively easy for buying interests to keep the price down in the first round after devaluation.

However, there should be some price rise in Australian currency with a fall in the foreign price of Australian wool. With these conditions Australian wool is relatively cheap internationally compared with wool from other exporting countries, and a demand substitution towards the less expensive product is logical: demand should switch against alternative synthetic fibres to pure raw wool in the manufacturing process as the former is then comparatively expensive: there may be some consumer price substitution of woollen for other clothing. Although the latter point is likely to be of little importance in practice as total raw wool costs are only about 10% of woollen clothing prices (Chapter 2), the increased substitution demand for Australian wool may cause its price to rise about 3% in domestic currency to a 10% devaluation.

With depressed conditions of unemployment, the ratio in value between wool exports and total exports should conform to levels existing in the ten years ending 1938/39. If this is so, and taking the rise in domestic prices of wool as being 3% and 10% for other products sold overseas, export prices fall 2½% in foreign currency and rise 7% in Australian money.

With higher export prices, output is not likely to increase rapidly in the short run, for as we have seen in the last chapter, large increases in rural production are mainly conditioned by an expansion of land in production. Moreover, the import-competing industry is also benefited by devaluation, and as rural input costs are bound to rise with higher import prices, increased investment in the export industry would be slow. The small addition to wool prices would not affect its physical output but, after a year or so with an increment in investment, wheat exports may increase 10% as this is readily obtainable.[3]

[3] Disregarding price substitution in Australian domestic market away from export product consumption with higher prices: such is valid as this demand is largely a function of population. The influence of changing real income is small as the composition of exports is affected more than value.

With these supply and demand functions for Australian exports, a 10% devaluation increases their total value about 9% in Australian money and decreases foreign currency earnings 1%.

Although the value of exports falls slightly in foreign currency, the probable reduction in the value of imports is about 15%, and any balance of payments deficit is mitigated through a reduction in imports (but see footnote page 81) with the terms of trade turning slightly against Australia. Under these circumstances the greatest expansion of profit margins would be generated in non-British import-competing enterprise; that part of the import-competing industry which is in contest with United Kingdom goods and the non-wool export industry receives a lesser advantage; wool growing comes lower on the scale, while the least immediate benefit goes to home-trade activities.

We should note, however, that higher export prices in domestic money combined with additional import-competing profits and a reduction of imports have an expansive influence on the economy. If with increased employment which should follow, labour and other inputs are able to raise their real rewards, the price of import-competing products may rise as much as the original increase in price of imported goods. In this case the change in price between imports and import-competing products evoked by devaluation is offset, and as the desired price discrimination is not achieved, any attempts to correct an external trade deficit would be abortive.

On the other hand, we are considering a case consistent with unemployment, and on such occasions the danger is not particularly acute (as in our next example), for extensions in demand can be supplied from productive resources which are without occupation. All the same, as an increase in labour employment is likely to result, real labour costs will rise most within the export industry, for as we saw in Chapter 6, expanding alternative job opportunities for farm workers cause the real costs of rural labour to rise relatively rapidly. Largely as a result of this factor no section of the export industry obtains a profit increment on a scale equal to any import-competing activity, and if investment follows suit, the greatest relative expansion is in import-competing production.

Our second example—devaluation in periods when employment levels in the major trading nations of the world are high—could be introduced to reduce or prevent a trade deficit when internal

money inflation or expanded national income[4] increase pressure on overseas payments. This state of affairs has existed in recent years, and after a sudden fall in wool prices the chosen method of mitigating the balance of payments difficulty was through the imposition of import restrictions.

With boom conditions British exports to Australia could be sold fairly readily on alternative markets (including the home) if the degree of devaluation were not extremely severe or sudden: it is therefore valid to expect the landed Australian price of all imports to rise by the ratio of the depreciation. Now, as suggested in the Note to Figure 3, import prices have little effect on the total value imported, and it follows that if national income remains constant, practically the same value of imports in Australian money will be consumed; or alternatively, the volume of imports and expenditure in foreign currency falls slightly more than 10% to a 10% reduction in the exchange rate.

However, as full employment exists *ex hypothesi*, import-competing industry cannot expand output quickly by using more inputs, and thus even with the price change between imports and local merchandise, a ready physical substitution of the latter is extremely difficult. In fact, increased domestic demand is much more liable to drive up prices of Australian production in this case, and in spite of careful fiscal and monetary management, the value of imports would be unlikely to decline much more than 10% (in foreign currency) even in the short period.

In turning to assess the outcome of devaluation with full employment upon the export industry, we can expect wool and other export prices to change by the same amount as with devaluation in periods of unemployment. But as an increase of input application within the export industry can be made effective only at the expense of other enterprise—and not, as with the previous

[4] As shown in Figure 4 the proportion of national income devoted to imports increases rapidly after a certain point. The upward rise in the propensity to import appears consistent with periods at which increases in domestic demand cannot be supplied internally through restrictions in production expansion due to full employment. Such a movement causes income effects to swamp price effects in import demand. As large increases in Australian real national income are dependent upon export prices, expanding marginal propensity to import does not adversely affect the balance of payments until the export price trend falls. Then the lag in residual overseas expenditure combined with falling international income precipitates an external crisis—such as that which generated the quantitative restrictions on imports in March 1952.

example, through an unemployed pool—it is unlikely that total rural production will expand rapidly. If these assumptions are acceptable, and taking the wool/non-wool export values as the ratio existing in the three years ending 1951/52, export income increases 6% in Australian money and falls 4% in foreign currency. As the volume of exports is considered to remain constant, average export prices parallel the reduction in value and also fall 4% in overseas money.

Taking the change in import and export values together, although the terms of trade move more against Australia than in depressed periods, the correction to any balance of payments deficit is not so severe; and in reality a devaluation acting alone may not remove an adverse trade balance. The original price discrimination against imports along with expanded money demand resulting from greater export incomes (in Australian money), causes the demand for import-competing goods to move rapidly upwards. Unless this dilation of demand is offset by appropriate treasury and banking policy, the movement is effectively inflationary in association with residual multiplying effects, and removes the initial price disparity formed between imports and import-competing products. Moreover, since the value of imports may increase more than income with full employment (Figure 4), strong money policies are essential to hold any devaluation.

Nevertheless, as the devaluation policy reduces the price of wool in foreign currency and raises the Australian price of other exports against wool, if the increases in money demand are controlled by other means, this policy has many commendable features compared with import restrictions. As we shall see in Chapter 9, quantitative import restrictions influence the pattern of Australian production in a manner essentially opposite to devaluation, and because of the desirable productive features forthcoming with the latter policy, we shall conclude that depreciation is a desirable aim. However, we must not allow conclusions to run ahead of our survey, and shall reserve discussion of this subject to a later stage.

We will now consider our last model: appreciation, with full employment at home and abroad. As the probable future British policy will be to sell as much as possible on the export market, supply from the United Kingdom is likely to keep up with demand increases in other countries, even if this requires starvation in the British domestic market. As Australia consumes only a small part of the production from other nations, any additional imports

after an appreciation will not exceed the current supply position of these areas. As a result (with *ad valorem* tariffs remaining unchanged) an appreciation will lower landed import prices in ratio to the alteration in exchange rates.

As shown above, with full employment, the value of imports is controlled mainly by the level of income, and if national income remains constant, approximately the same value of Australian money is spent, plus a margin for the increased imports which result from a price substitution of imported products in place of import-competing. If these two sources of merchandise were fully competitive before appreciation, a 10% reduction in import prices may increase the quantity consumed from between 10% to 30%—say, 15%.[5] Therefore imports increase in value about 5% in domestic money and 15% in overseas money.

On the export side the price of non-wool products sold abroad falls in proportion to the degree of appreciation for reasons similar to a proportionate price rise with devaluation. For wool the situation is not the obverse of depreciation effects and, in fact, it is difficult to make dogmatic assertions as the change in Australian price depends largely upon aspects within the wool market at the instant of exchange adjustment. The appreciation impact effect is to advance the price in foreign currency as wool is sold in Australia in domestic currency; and although buyer interests exert power to force a fall in Australian wool prices, as the actual consumer demand for woollen goods is controlled by real income levels and because raw wool costs are a small part of the price of the finished product, a rise in wool prices does not affect the quantity demanded very much. There will be some price substitution towards alternative supply sources with a rise in the foreign price for Australian wool, and although this movement is of finite capacity, some fall in domestic price is logical. Nevertheless it is only possible to suggest that the new equilibrium price (in Australian currency) may vary between a slight fall and a full price decline with the ratio of appreciation. The actual shift depends upon such factors as the relative monopoly strength of buying and selling interests in the auction room; whether appreciation takes place in the selling season; whether manufacturers make an increase in raw wool prices an excuse for relatively large increments in textile prices (which has been the case with "high

[5] Being greater with a successful maintenance of full employment in Australia.

world" real income); stocks of raw wool held by manufacturers; and quality, price and elasticity of supply of synthetics.

If we say Australian wool prices fall 5% with a 10% appreciation and other export prices fall by the ratio of the exchange alteration, in the four years ending 1950/51 (expressive of wool/non-wool value ratios which would allow Australia to be in a position to contemplate appreciation) export income falls 7½% in domestic and rises 2½% in foreign currency.

As the foreign value of imports increases 15% or more, the marginal value of imports rises from five to ten times the marginal expansion in the value of exports, and owing to pressure on the balance of payments which would follow, exchange control or some other form of import restriction would be essential for appreciation to work. In other words, it would be necessary to restrict competition between imports and import-competing wares, so in actuality, the latter would have disproportionately high profits. In this case profits obtained in export production would be relatively unprofitable to all other industry and productive resources would move out of the former to give, in time, a much reduced volume of exports with the least decline in wool. Indeed it is conceivable that wool production would expand with its substitution for other rural enterprise. With an increasing Australian population consuming an ever greater portion of the export surplus (especially products other than wool), combined with future uncertainty about wool prices, the appreciation policy is economic suicide.

CHAPTER 8

Tariffs: Effects on Australian Production and the Balance of Trade

TALKING and writing about the consequences of an Australian protectionist policy have been among the favourite occupations of philosophers, politicians and economists since David Syme began his campaign of protection for Victoria in the late 1850's. In fact by now, nearly 100 years after the genesis of fierce controversy, the volume of published literature about protection and free trade for Australia is as great as the tariff rates themselves; but because the greater portion is inspired by political motives, distasteful fundamental implications have not been considered, or if considered, quietly dropped. The sounder writing has in general been concerned with the optimum amounts of so-called "excess costs" (consequential on protection) which should fall on the export industry and certain other parties, or associated with using the tariff ideal as a means of promoting full employment. But since full employment can be achieved by alternative means, and because of our greater interest in productive patterns than excess costs as such, little reference is made to traditional works in this section.

Much of the misunderstanding in protection and free trade talk arises from an erroneous conception of the purpose of a tariff. It should be apparent from our analysis in the last two chapters that the primary motive is to guard the protected enterprise against competition for productive resources from the more naturally efficient domestic activities. This is the basic factor and fundamental to any consideration of the desirability of a protection policy or its level: the more obvious "protection" of domestic industry from foreign competition is the manner in which the internal competition for resources is made effective.

The artificial alteration of domestic profits between different industries via protective devices has definite limits and this factor has usually been appreciated in traditional literature associated with ascertaining the excess costs of the Australian tariff. The

fundamental reason for international trade is that a general increase in national and world income can result from the exchange of goods and services between different nations; those countries which produce goods with relative international comparative advantage export such products and import goods whose production is unfavourable in the domestic economy. Forceful statements about protection from cheap foreign labour do not usually take cognizance of this two-sided nature of international trade, and the general domestic interest is often warped by propaganda from strong sectional pressure groups. If protection against goods made in countries where wage rates are low were as important as some of its protagonists would have us believe, then Australia, North American and European countries would not export to those nations. But Australia exports wool to Japan and naturally so, for there is a comparative advantage in natural wool growing resources which still exists after high wage rates are paid. Indeed, the high real wages reflect the profusion of these resources; while alternatively, in some other countries the paucity of natural resources enforces low wage levels.

The manner in which tariff impositions increase the competitive nature of the import-competing industry for productive resources in Australia has many side effects which can be illustrated most effectively by diagrams, and this flow of costs and prices with resultant changes in production, is depicted in Figures 5 and 6. Owing to the unique position of home-trade enterprise, the effects may vary somewhat between occasions when unemployment is of sufficient degree to cause current possible home-trade output to be in excess production (Figure 5), and when employment is at a level adequate to make home-trade products scarce resources for other production (Figure 6). Traditional works considering this point suggest the home-trade industry passes on the excess costs of protection which fall upon it, and that, in time, all excess costs fall on fixed income recipients, buyers of luxury goods and the export industry. Actually, this view is restricted to the conditions of full to over-full employment.

Home-trade products consist of bulky or perishable goods for which freight costs are high compared to value, services and professions: or in alternative classification, basic materials (bricks, timber, coal, etc.); utilities (transport, waterworks, electricity, gas, etc.); professional services (lawyers, politicians, bookmakers, priests, teachers, etc.); the wholesale and retail trades and market gardening.

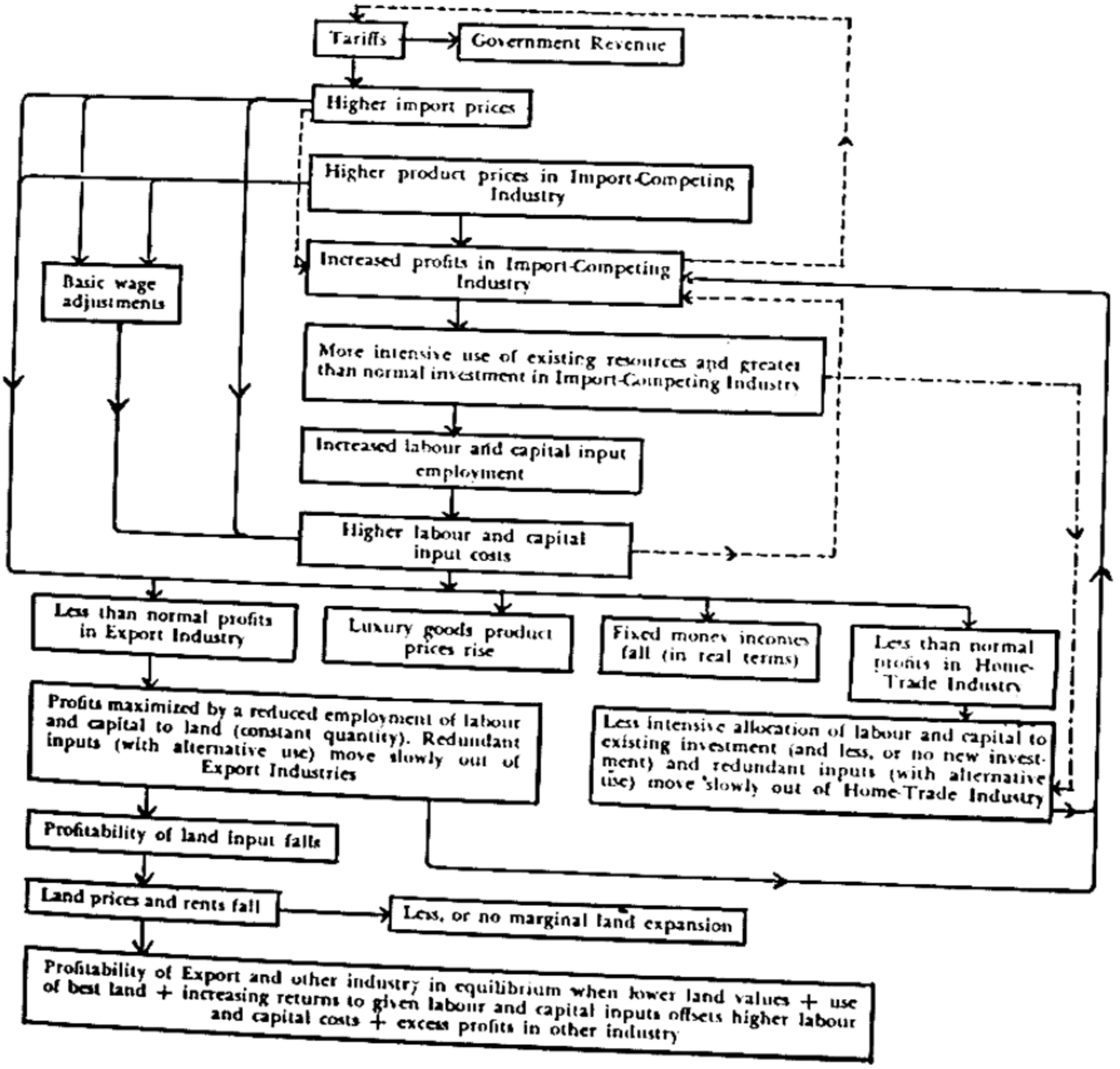

FIGURE 5

THE EFFECTS OF TARIFFS ON THE COST STRUCTURE OF AUSTRALIAN INDUSTRY: GENERAL UNEMPLOYMENT

The change in employment of basic materials such as bricks and coal depends, in the main, on the level of investment activity. For instance, if there is no investment, building materials are used only as replacements. The use of fuel varies directly with changes in investment but not within current output as, for example, the consumption of coke in a single blast furnace increases less than proportionately to production if two shifts are worked instead of one, but if a new blast furnace is constructed, coke employment is doubled. In other words, employment of basic materials changes less than proportionately with varying production inside existing investment, while with a marginal extension of investment construction, basic material use expands rapidly. With widespread unemployment, construction activity is low and in such periods Australian basic materials are in potential or actual surplus. Moreover, as different kinds of basic materials are to varying degrees substitutes, competition for use does not allow excess costs to be passed on to consumers.

Transport, waterworks, gas and electricity are usually government utilities, and as they may or may not run at a loss, there is no question of passing on costs. If any of these services are owned by private enterprise they are competitive with substitutable government services; or alternatively, prices are subject to government control (e.g. the pre-war Adelaide Electricity Trust). Wholesale and retail trades work on constant margins which are rarely changed except in periods of full employment. Market garden auction sales are reasonably free of sellers' price rings, and no opportunity exists for directly shifting costs. Professional services such as medicine and law may have scope for transferring increases in costs, but as these services only engage a small portion of total market expenditure, the effects may be disregarded. In any case, the ease of shifting the burden of cost increments is being progressively restricted by the growth of the welfare state.

As many firms within the home-trade industry compete only with a small number of enterprises producing the same goods or services, price competition between them for the sale of their particular wares is almost invariably restricted by mutual agreement. With such a set-up (oligopoly), competition for expanded markets by particular firms finds expression in such devices as advertising, and prices tend to remain constant except in periods of full to over-full employment. As high levels of resource employment are paralleled by steep rates of investment activity and

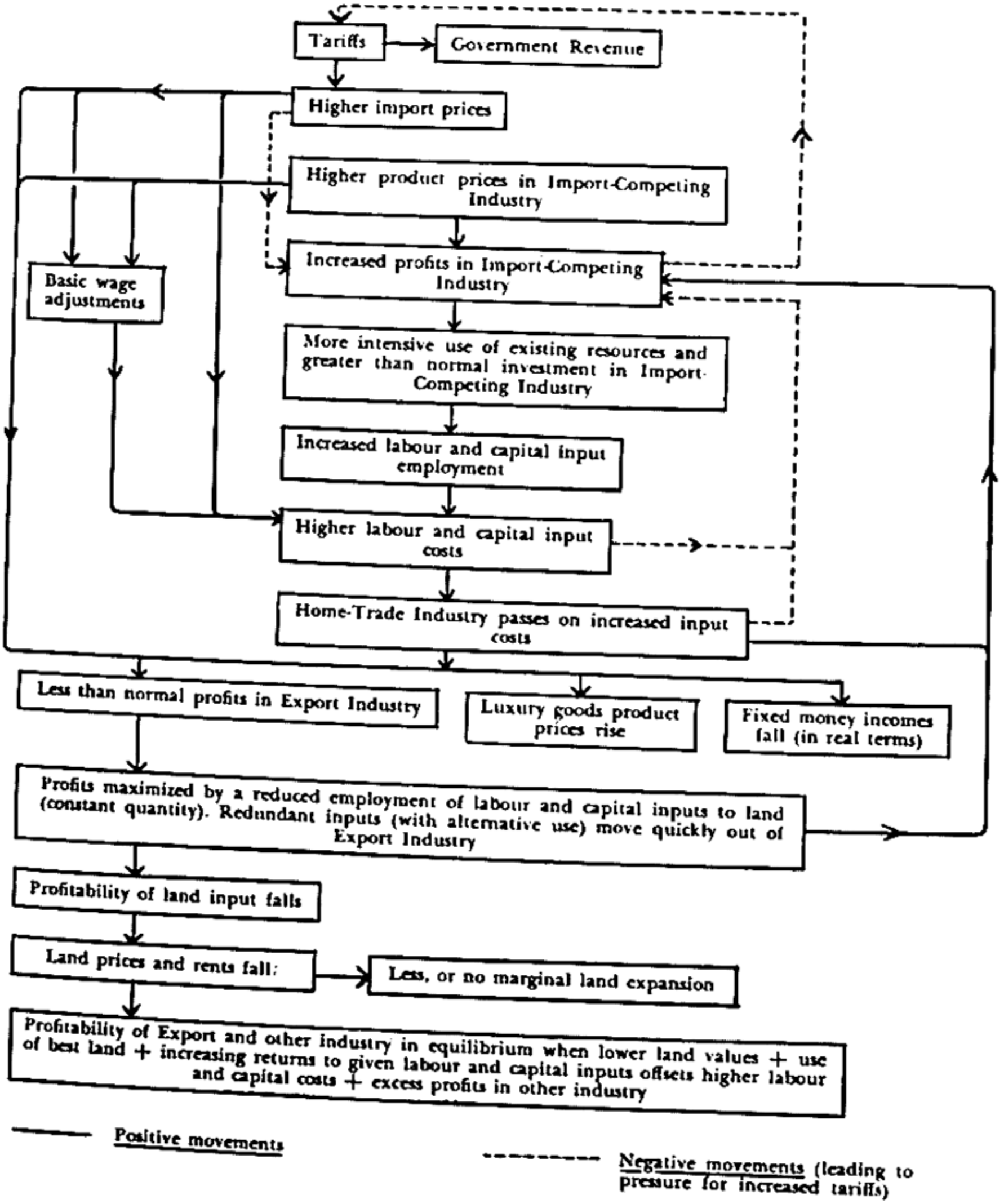

FIGURE 6

THE EFFECTS OF TARIFFS ON THE COST STRUCTURE OF AUSTRALIAN INDUSTRY: FULL TO OVER-FULL EMPLOYMENT

elevated real income, the demand for home-trade products inclines towards exceeding the supply; competition between substitutable products is not so important, and in reality, product prices may be increased more than any expansion of input costs would warrant.[1] In general, we can say the home-trade industry (as a whole) passes on costs to an excessive degree in periods of full to over-full employment, while with large scale unemployment, it is in much the same position as the export industry.[2]

Inasmuch as opportunities for profitable investment in the home-trade industry expand with shifting of cost increments to an excessive amount when employment levels are high, the demand for labour and capital inputs (and therefore their price) inflates more than in periods of general unemployment. This influence evokes a lower rate of profit in the import-competing and export industries than similar tariff increases when unemployment is prevalent, for not only do capital and labour resource costs increase more, but costs also rise inasmuch as both these industries use home-trade products as inputs. In fact, this movement hastens the progress of productive resources out of the export industry (assuming, as we shall, constant export product prices); and owing to the relatively high induced cost structure, demands for higher tariffs or other protection recur with increasing rapidity.

Not only do increased labour and capital costs lower profits in the export and, with unemployment, the home-trade industry, but as shown in Figures 5 and 6, the excess costs are also borne by those who purchase luxury goods or live on fixed incomes. Manufacturers of luxury goods hand on any increases in cost, and as buyers of these wares do not use them as inputs for other production, excess costs must stick with final purchasers. Although State pensioners usually receive constant real incomes (in relation

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[1] For some products presumably up to the level of price competition with similar imports. See footnote, p. 77.

[2] In times of prolonged unemployment a net movement of resources into import-competing industry (as a result of tariffs) will raise demand for some home-trade products, as the latter usually have greater complementary connections with import-competing than export production. This will inhibit the movement of resources out of home-trade production and, in time, may expand total output. However, there is little opportunity for making excess profits, for although particular production may have oligopolistic or monopolistic structure, there is still competition with alternatives.

to political expediency), as annuities, superannuation, insurance and bond interest payments are generally constant in money, fixed interest holders are unable to pass on the excess costs of tariff protection. In other words, the real purchasing power of fixed money incomes falls.

In Chapter 6 we suggested that land prices (rents) fall with depressed rural profits to alternative enterprise, but the actual degree of the fall as generated by a relative and absolute decline in export profits depends upon two factors. Firstly, as land prices are proportional to expected rural profits in the long run, the rise in real labour and capital input costs following tariff increments lowers the price level by depressing rural profits,—and, as we have seen, the range of any increase in labour and capital costs is influenced largely by the levels of employment at the time in question.

Then secondly, the change in land prices turns upon the amount of labour and capital used in relation to land to produce the export product. If, as in fruit and dairy production, labour and capital costs are a large portion of total costs, land prices will be prone to decline considerably as profits are affected most severely. Alternatively, where labour and capital costs are not so important as in merino wool or beef production in the "bush", land prices will fall much less. Now the labour and capital costs of clearing a given area of high-rainfall virgin country are much more than for clearing a similar acreage of low-rainfall scrub land, but as the tariff has raised labour and capital costs and tended to depress the price of good land most, the net effects have been to brake the undesirable extension into poorer marginal lands to a considerably lesser extent than high-rainfall marginal areas.[3]

Because better land has opportunities for highly productive wool or meat production, using much less labour and capital than alternative enterprise such as horticulture and dairying, by raising these input costs the tariff has operated towards closing the gap in net income which normally exists between these activities on a given area of higher-rainfall country. That is, the fall in profits within rural enterprise using capital and labour intensively is greater than for alternatives using a lesser amount. With the

[3] If labour and capital costs of clearing land are high, land prices may need to be negative for an increased marginal clearance. (Disregarding the effects of high income tax on large incomes without a tax on capital gains which has influenced the extension of high-rainfall clearing in recent years.)

resultant increasing tendency of price support for good land by wool- and meat-growers, combined with the tariff-induced restriction in supply, the price of such land does not fall as much as the protectionist policy would warrant.[4] The price does not fall enough to equalize increased labour and capital costs (the price of unimproved poultry land may need to fall to a very high negative amount) and, as a result, the profits from growing various export products change inversely with the proportion of labour and capital to total costs in producing the products concerned. We should note in passing so as to avoid confusion, however, that this does not mean that the absolute decline in the price of better land is less than for poorer quality,—it is likely to be considerably more.

Since changes in relative profit margins evoke similar alterations in production in the long run, tariffs have caused the least decline in wool, beef, mutton and lamb production. Indeed, it it is conceivable that the output of these products (in particular, wool) may expand with a substitution towards their production in higher-rainfall areas. The consequences of protection on wheat production have been more severe, and the export products most affected have been those using a high proportion of labour and machinery to land, and among these are dairy products, fruit, wine and poultry. This infers that subsidies paid towards the production of the latter products have not been, as many believe, protectionist, but have merely offset some of the more savage developments of protection granted to import-competing industry.[5]

Considering the export industry as a whole, output will decline until the profitability of export production is in long-term equili-

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[4] Naturally there are other reasons (devaluation, subsidies, speculation, etc.), but the above prove the point in regard to tariffs.

[5] As tariffs are implemented for the express purpose of forcing productive inputs away from export activities, the cycle appears crazy. Fortunately—for Australia, and especially as protection for all is "good" politics—this may not be so. If this form of protection is adopted and if, as a result, imports are restricted, the export surplus expanded and the tariff revenue pays the rural subsidies, then the policy is comparable to beggar-my-neighbour devaluation. This policy will raise effective demand and employment in periods when unemployment exists (if other nations do not retaliate). With full employment the policy is inflationary and conducive to balance of payments difficulties in the long run. The policy (without retaliation) allows an expansion of import-competing production without the induced destruction of much of the export industry.

brium with other industries.[6] Although labour and capital[7] input costs rise as a result of tariffs, this effect and the excess profits to other industry (which includes home-trade enterprise with high employment levels), are offset in the rural arena by the sum of lower land values, the concentration of production on better quality land and, assuming diminishing returns as we have on page 75, average increasing returns to unit labour and machinery inputs as export production becomes less intensive.[8]

As many export products are consumed within Australia, a given reduction in output may produce a much larger percentage decline in actual exports. As only about 9% of Australian wool production is consumed domestically, a given decrease in output leads to much the same fall in the volume of wool exports. How-

[6] With unemployment, output on family farms may not fall in the short run, for with higher hired labour and capital costs, family labour is increasingly substituted to keep gross farm profit intact. But as the marginal product of family labour is then yielding less than the national average, as soon as alternative employment opportunities are available, some of the family will move away from the farm. Then, although farm output falls, family income is maximized.

[7] Capital input costs rise chiefly through higher import-competing product prices, although the direct effects of the tariff can be considerable. The following are a few examples of the latter:

AUSTRALIAN TARIFF DUTIES (1951)
(*ad valorem* unless stated)

Product	*British Pref.*	*Most Favoured Nation*[a]	*General*
Tractors	free	8·8%	8·8%
Internal Combustion Engines (up to and including 50 h.p.)	27½%	52½%	57½%
Wire: No. 15 or finer	10%	40%	50%
Other gauges	5%	5%	15%
and per ton (specific)	–	120/–	120/–
Petrol and shale products (specific) ..	10d (gal)	10d	10d
Most farm machinery[b]	5%	27½%	27½%

a Includes U.S.A.

b Exceptions include dairy and orchard equipment which have much higher rates.

Source: Department of Trade and Customs, Canberra.

[8] On efficient Australian farms diminishing returns may result from an increment in capital or labour to a given area of land. But in relation to recent technological advances, it is likely that an expansion into high rainfall marginal lands would not yield diminishing output to that obtained from given labour and capital expenditure on an equal area of somewhat similar land in actual production.

ever, for most other products the variation is considerable. A 10% decline in output would, at present domestic consumption levels, reduce wheat exports 18%, butter exports over 30%, beef and veal 90%, and lamb 43%. (Small production changes through seasonal influences have a similar effect.) Therefore the present protectionist policy increases Australia's dependence upon wool for earning foreign currency, for not only do tariffs have little influence on the total amount of wool production, but the margin exported is reflected less than other export products in a changed output. As non-wool exports are a large portion of the total value of exports when wool prices are low (and even over 50% in recent years), it is necessary, if the balance of trade is to be kept in order, that the value of imports should decline through tariff increments by at least as much as the value of exports. This is a most important part of any investigation into changing production, for it is directly concerned with Australia's ability to withstand variations in the international economic climate. Indeed, the process goes much further than this, for Australian external prestige is largely concerned with the strength of its overseas balance sheet.

The impact effect of a tariff is to raise the price of imported products in the domestic economy, and therefore, if imports have a price elasticity of demand greater than unity (which infers alternative Australian goods are available and not inferior), a lesser amount of Australian money is expended on imported articles and more on domestic substitutes.[9] If the demand elasticity for imports is equal to unity, the value of import consumption remains the same before and after the tariff imposition, and as a result, total amount spent on Australian alternatives remains constant. When the elasticity of demand for an import is less than unity (suggesting the Australian alternative does not exist or is very inferior), a tariff increases consumer expenditure on imported wares, and the demand for Australian products declines.

However, these effects are modified if increased customs revenue causes a remittance of other taxes, for if this occurs, changed consumer expenditure in one direction is offset in another. But the remittance of an amount equal to any tariff revenue is most unlikely, for as pointed out in the Australian tariff classic,[10] there

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[9] Assuming throughout constant income distribution and propensity to spend.

[10] *The Australian Tariff An Economic Enquiry*, M.U.P., 1929.

is a union of interest between protection advocates and the Commonwealth Treasury. In fact, it is probable that the average price elasticity of demand for imports must not fall below 0·9 for tariffs to cause a diversion of Australian market expenditure away from imports to alternative domestic production. Only in this case could import-competing industry sell a greater quantity at a higher price: with moderately inelastic import demand, although import-competing industry can charge a higher price than without tariffs, total market expenditure and the physical volume which can be sold must be less. As a result of a general tariff, a host of goods are able to sell at a profitable price, but as the actual output of many manufacturers must be small because of an inelastic import demand for the product concerned and small population, there is little opportunity of taking advantage of low cost large scale production.

In periods of general unemployment, it appears as though the average price elasticity of demand for imports lies around 1·1 (Figure 3). Hence an increase in general tariffs will lower total market expenditure on imports (but see footnote page 81); raise expenditure on domestic production (the actual amount depending upon the value of other taxes remitted owing to increased customs revenue); and lead to an increase in employment. If we assume that the reduced volume imported does not alter overseas supply price, these movements evoke a reduction in the total value of imports in foreign currency, and as export production is fairly constant in the short run, an improvement in the balance of payments position should result.

In the long run the situation is very different. The output of the export industry is about the same in value as the import-competing and these two together make the predominant portion of total Australian production. Home-trade output is worth a lesser amount than either of the former, and because its products are by nature complementary to production in other industry, bulky and perishable foodstuffs or essential services, its output tends to be relatively constant. Therefore, any marginal increase in input employment in import-competing production will induce, in time, a marginal decline in resource use of much the same order within the export industry. Now, the efficiency of resource employment in the export industry is much higher than within the import-competing under *laissez-faire* conditions. Consequently more real value is produced for less cost in the former (if this were not so there would be no need for protection) and, because more

labour is required in manufacturing than in rural enterprise to produce a unit value of output (due to the extreme differences in productive processes), the decline in export production is much more than any increase in import-competing manufacture.[11] In other words, over the years, production of exportable commodities falls more than Australian manufacturing replaces imports.

However, it does not necessarily follow that the balance of trade situation is aggravated: the situation could well be saved if a lower volume of exports increased prices sufficiently to make up any difference evoked in overseas income through a reduced supply. In making a review of the likely changes in price for Australian products sold internationally following variations in quantity exported, if we presume overseas countries do not retaliate against Australian tariff increases (in actuality a grave risk), and that the national incomes of nations who export to Australia are not affected, then the change in price for each product will depend upon the external elasticity of demand and the absolute reduction in world exports (following a smaller Australian output in the product concerned).

As Australia exports the greatest quality of apparel wools, and because the price elasticity of demand for raw wool is extremely inelastic (Chapter 2), a reduction of Australian wool exports will, in the short run, increase the total value of the reduced volume exported. However, as synthetics may be substituted for pure raw wool in textile production and as high prices lead to an extension of pure and synthetic production in other countries, this policy is essentially unsound. But as we suggested on page 96, it is likely that tariffs have increased wool production, and hence the consequential influences work in the opposite direction to reduce the total value of Australian wool exports. For other exports of international significance, variations in output do not affect world prices to any degree in the long run. Australia's second most important export, wheat (and flour), has in recent years been about 13% of world exports. Thus a decline of 10% in

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11 In this connection the argument for tariffs—because rural enterprise shows decreasing returns against increasing returns in manufacturing activity—appears specious, not only from the angle established by Professor Anderson (Karl I. Anderson: "Protection and the Historical Situation: Australia", *Quarterly Journal of Economics*, November 1938), but also because the general tariff has made it extremely difficult for even naturally efficient Australian manufacturing to obtain decreasing costs to scale, and as it is doubtful whether diminishing returns to scale are applicable to much of present day Australian export enterprise (footnote 8, p. 97).

Australian production through tariff policy would give a short-term reduction in world exports of 3% (a 10% reduction in output giving an 18% fall in exports). If this increased world wheat prices, other exporters would soon expand production and no net price increment would result. The same can be said for all other Australian exports of importance. In fact, owing to the unique effects of tariffs on wool production as against rural commodities using more labour and capital to total costs, if the terms of trade changed it is probable that the switch would be disadvantageous to Australia. On this account, a smaller volume of exports (as a whole) does not lead to an increase in their value.

But the story does not end there. Not only does the production of exportable commodities fall more than domestic manufacturing replaces imports; not only do the terms of trade tend to turn against Australia; but as we saw on page 98, a given decline in export production causes a multiple change in actual exports for goods other than wool. As a result, in the long run, tariffs do not reduce any balance of trade difficulties. In fact, they increase them.

However, we should digress at this stage to consider the consequences when large scale unemployment exists in Australia. With such conditions undisguised unemployment occurs in the export industry (labour remains in the rural arena simply because work is not available elsewhere), and much of any increase in import-competing employment is made effective through drawing on the unemployed labour pool. Indeed, the slow transfer of labour out of rural occupation in periods of unemployment largely explains the temporary increases in total employment and any short-term benefit to the balance of trade which may result in these periods.[12]

All the same, over a duration of time when labour transfers have opportunities of becoming effective, or if protection displaces the unemployed pool, increases in import-competing output are at the expense of export production. In many respects this aspect is at the core of essential differences between tariffs and devalua-

[12] If resource unemployment is extremely severe—as in the early thirties—it is extremely difficult, even temporarily, to correct a trade deficit by the tariff weapon. Non-essential imports virtually cease owing to low income levels, and actual imports are either essential to the continued existence of the economy or complementary to domestic production. Unless the tariff revenue is refunded in full through reductions in alternative taxation, this policy gives less expenditure on Australian production (import volume constant) and, as a result, greater unemployment.

tions, for in the latter both industries expand by drawing on any unemployed pool.

When full employment occurs tariffs may be increased in attempts to alleviate any balance of trade difficulties,[13] to offset the effects of domestic money inflation or high export prices—or for that matter, all or any two of these factors acting in combination. In regard to high export prices, protection levels could be raised to enable import-competing prices to advance and thus allow a more vigorous competition with the export industry for available productive resources. With employment at high levels the price elasticity of demand for imports is low (note to Figure 3), and consequently tariffs increase the total amount of domestic expenditure on imports and reduce expenditure on domestic production. However, these effects can be overrated, for much of the rigidity in import demand with full employment results from the non-availability of Australian alternatives. Since additional protection raises the price at which import-competing wares may be sold, resources will follow the call of profit change and move quickly out of export production. Any expansion in manufacturing is made entirely at the expense of export enterprise: there is no unemployed labour pool or disguised unemployment in rural areas and it is probable that home-trade industry would expand.

At the same time, as labour is in an excellent bargaining position and home-trade activities pass on costs (usually excessively), labour and capital input costs rise rapidly to dissipate any tariff-induced difference between import and import-competing prices. Thus besides a greater velocity in the external cyclical effect on the balance of trade, there is an internal cycle operating to increase input costs as much as the tariffs themselves concede additions to import-competing product prices. Although tariffs always show a culminating tendency towards leading to the necessity for increases—as reflected by the negative movements in Figures 5 and 6—the vicious circle is much quicker and tighter when employment levels are high. With such circumstances, as recent empirical evidence shows, balance of trade difficulties may result, even though export prices rise to fantastic levels, and increments in protection have a short-lived influence on raising the competitive nature of Australian manufacturing against imports.

Indeed, as this rather miserable epistle proceeds one may

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13 Figure 4 shows that the portion of national income spent on imports rises rapidly with full to over-full employment.

ponder on the purpose of creating such a monster. Still, like Caliban, it has its uses and is dangerous only when it usurps the role of lackey.

As a unit of production from the manufacturing process uses more labour than a similar value of export production, and because tariffs give a net expansion of domestic manufacturing output, protection is one of the ways in which a high level of labour employment can be assured. If full employment of the desired or actual Australian population cannot be achieved without protection, then in the short run tariffs may maximize national income, for the poor allocation of resources gives a lesser national loss than large scale unemployment. But because tariffs themselves cause the value of exports to decline more than imports, this gives a balance of trade crisis, and in turn necessitates some more severe form of import restriction. Now, as any action which restricts the volume of imports is, in effect, protectionist, the whole policy is cyclical in nature, and if allowed to continue in Australia could proceed until the nation is a closed economy.

Thus there is a limit to using the tariff as a weapon for maximizing national income. With the alternative means now accepted to keep labour employment at high levels, real national income (in relation to productivity) could be greater if tariffs were lower than those in force at the present time—or in fact, abandoned. Nevertheless, Australian population expansion and industrialization are agreed aims: therefore in our conclusions we will suggest a policy which will allow both the export and import-competing industries to expand output. If this or some alternative similar policy is not introduced, then the Australian tariff will, in time, through the tentacles of its own destruction, destroy all that its introduction was intended to build.

CHAPTER 9

Effects of Import Restrictions and Imperial Preference

IMPORT restrictions are like tariffs inasmuch as they raise the profits of import-competing industry; for by restricting the physical volume of imports, all price competition between import-competing products and imports is effectively removed. Since quantitative restrictions effectively regulate the amount of imports in a particular period, tariffs, as a measure of protection, become redundant. Indeed, it is ironical that the Tariff Board should seriously deliberate upon the desirable level of protection, when behind their backs, Australian import-competing industry is absolutely sheltered from any external price movements.[1]

If with existing tariff rates, more were imported without quantitative restrictions, then it follows that a smaller amount of imports leaves a gap between supply and demand. As some would-be customers are willing to pay a margin above the normal price to obtain the articles in scarce supply, importers are able to sell the reduced amounts at higher prices.[2] This raises costs inasmuch as imports are used as inputs in Australian production, but what is more serious is the over-all protective nature of the restrictions. The imports whose entry is most severely controlled are consumer goods (originally 20% of 1950/51 imports: in early 1954,

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[1] The present function of the Tariff Board is comparable with an adjudicator who decides the proportions in which "excess" profits are allocated between government revenue (customs receipts) and the pockets of importers—or, in some cases, consumers.

N.B. Importers are a monopoly or oligopoly (in relation to each imported product) of merchants who were lucky enough to import goods in the base year (1950/51).

[2] As the price elasticity of demand for imports in periods of full employment is extremely low, and because tariffs have not increased to any degree in the last few years, importers' profits are (or could be) extremely high. Actually, if import restrictions are not particularly severe, more is spent in Australian money on imports at the retail level than without them. This is probably so with some Australian imports in recent years, and leads, as shown before, to a high price for alternative domestic production but a small market.

60%), and as this has expanded opportunities for the sale of domestic alternatives, Australia is now increasing investment and production at absurd real costs in producing a small amount of each product.[3] At these levels of effective protection, if we assume constant export prices, profits from export production are quickly reduced to a relatively low level: output falls as resources move to alternative enterprise, and this necessitates in time greater import restrictions to keep the balance of trade in order.

Thus although import restrictions are similar in many respects to tariffs, as they appropriate "excess" profits to others than the government, there is no opportunity of taxation remittances through increased customs revenue. Since they give an excessive general protection to import-competing industry, and, because the possibilities of retaliation by other nations against Australian exports is more likely, the adverse effects on export production are much more severe. If the Caliban of tariffs appears now as sweet usefulness, it may be wise to inquire into the need for creating this Frankenstein.

Since Australian export income is liable to extremely sudden, violent and unexpected disturbances, it is necessary to keep sufficient reserves of gold or London Funds to meet a sudden decline in income, as payments in the form of imports are relatively constant in the short run.[4] Devaluation price adjustments do not cause an immediate favourable movement in the balance of trade because there is always a time lag between price changes and variations in the quantity purchased. Hence this form of action is unsuited to correcting sharp declines in export income (such as a fall of 50% in wool prices in late 1951) and, if adequate international reserves are not available to meet the unexpected deficiency, then import restrictions are inevitable.

Quantitative restrictions are only valid as a temporary expedient for the above purpose, however, and the longer they remain in

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[3] See p. 99.

[4] As considerable portions of Australian overseas payments are fixed in terms of foreign money, the lower the export income, the greater the percentage of available foreign exchange devoted to covering these. (In 1931/32 public authority interest payable overseas was 57% of imports, in 1950/51, 3·3% and 15% in 1949/50 at the 1939/40 value of imports.) Because fixed foreign currency payments restrict imports by an equal amount, no protection or devaluation device can lessen the burden: hence in effect, the amount devoted to these charges has a price elasticity of demand for imports equal to zero. This factor increases the difficulty of keeping the balance of payments in order when export income is low.

force the more difficult it will be for Australia to resolve any trade deficit without their continuance in greater severity. Moreover, as devaluation requires more political courage, they will probably be maintained unless wool prices keep rising. Nevertheless, as the inflationary risk resulting from a devaluation with full employment is no more acute than with import restrictions,[5] and because the former changes the real profit margins of the various export products in a desirable manner (Chapter 7) besides increasing the relative profitability of export production as a whole,[6] devaluation should take place immediately.

From the discussions on tariffs and import restrictions the economic effects[7] of Imperial Preference should be obvious. As parties to the Ottawa Agreements have restricted free trade competition by giving a margin of preference to each other's goods regardless of supply prices in the rest of the world, foreign nations have been unable to sell as much to the Commonwealth as they would otherwise have done. This means that they earn less sterling than with freer trade, and because most currencies are not readily

[5] The import restrictions of March 1952 reduced commercial confidence in Australia to such a degree that a rapid temporary rise in the propensity to save resulted; thus greater inflation was, temporarily at any rate, averted.

[6] If *ad valorem* tariff rates are reduced following a devaluation to keep import prices constant, or less, in Australian money.

[7] The political and social aspects are outside the scope of this work. However, the economic aspects are integrated with these. In the course of its evolution the British Commonwealth (as it is called today) has never been an entirely rigid or static political and social organization. In the past when political or social measures have called for an alteration in the form of government within the Empire or Commonwealth these have mostly been granted. Actually this gradual change in the centres of power, philosophy and social intercourse has allowed the system to continue. It is the general acceptance of a changing fabric, growing self-determination and self-freedom, combined with mutual obligations and understanding which has given the present system its strength and force. At present the British Commonwealth is a union of essentially free, and in the main, understanding people; and it is in the interests of an evolution to world government—or, less ambitiously, a middle power for the preservation of peace—that it should be expansive outwards and not contractive inwards. As Imperial Preference is of the latter it will not lead to stronger political and social associations either within the Commonwealth or with other countries, and much of the expansive nature of the Commonwealth could be frustrated. Greater Imperial Preference itself could, in time, cause the political stagnation and social disintegration of a system of Commonwealth unity which, with progressive response to any challenge, may well evolve into a wider system.

convertible into or out of sterling, it has been necessary for most foreign nations to restrict purchases from the Sterling Area[8] to the amounts currently earned.

This has affected Australia in two ways. Firstly, as the Ottawa Agreements countries have not the greatest world comparative advantage in producing everything, those products—and they are many—which are produced and sold most cheaply in foreign countries are protected the most in Australia.[9] This has not only given increased profits to some import-competing industry and invoked a movement of resources out of export production in the usual way, but machinery imports, especially from the United States, have been subject to extremely high rates of duty.[10] Secondly, as many nations have experienced an induced shortage of sterling, or because they interpreted the action as Imperial arrogance, they have discriminated against Sterling Area exports. This has led to reduced expenditure on Australian products by countries such as Germany, France, Japan, U.S.A. and Italy, and has in turn lowered Australian export prices.

In other words, Imperial Preference has increased money product prices considerably more than input costs in the Australian import-competing industry, and has increased input and lowered product prices (as a whole) for the export industry. The net effect has, therefore, been a movement out of export production.

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[8] Most of the parties to the Ottawa Agreements are the overwhelming portion of the Sterling Area.

[9] In 1932 Australia adopted the Imperial Preference technique by increasing *ad valorem* tariff duties on non-British goods: not by leaving the general tariff unchanged and introducing a lower margin for British goods.

[10] See footnote 7, p. 97.

CHAPTER 10

Marketing and The Constitution

In the last four chapters the effects of government policy on product prices and input costs within the various industries have been discussed at length. Our argument was, however, associated with relatively long-term developments and although we were able to trace the consequences of any governmental action without complications by assuming constant export prices for the most part, we avoided considerations of shorter movements in the profitability of export production. Australian exchange rate adjustments, tariffs and associated policies influence rural production by changing relative profits in various industries away from *laissez-faire* levels, but if we take the effects of these policies as given, then the current profitability depends upon the state of the market at the time in question. As rural product prices may vary considerably in time,[1] and owing to the high induced labour and capital cost structure, financial assistance has often been necessary to keep several types of farmers in business.

The manner in which financial relief is granted to rural enterprise centres round the alternatives of a home-consumption price or direct support (bounty) payments.[2] Since the consequential

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[1] Since both the elasticities of supply and demand for rural products are generally low in the short period, either a small shift in supply (seasonal conditions) or demand (effective demand), or both, can give a large price change. This suggests that rural prices would be more stable if the trade cycle were eliminated or international agreements for all rural products instituted. However, in a world of violently opposite political and religious opinions; of large countries and small, in which some are more dependent upon trade in rural staples than others; where some countries are essentially importers of rural produce and others exporters; agreements have been few and short-lived. The international aspects of marketing are not discussed in this chapter.

[2] Although there are combinations or variations of the two they form the foundations of any financial assistance. The Australian home-consumption technique has been used to increase returns from growing products such as wheat, sugar, butter and dried fruits. Direct supports, which have not been so popular, have been paid towards the production of wheat, wine, cotton and tobacco etc.

developments from the two forms are at variance and influence our conclusions, we will examine each in turn in some detail.

As the price elasticity of demand for rural products in Australia at the farm level is usually less than unity, an increase in market expenditure is assumed to occur if less is sold for a higher price on the domestic market and the excess dumped abroad with the export surplus. If marketing margins remain constant, this will raise gross profits from the sale of the product concerned if less on the Australian market raises prices sufficiently to offset the effects of expanded exports on world prices.[3]

However, not only do these schemes suffer from a functional restriction due to their probable Constitutional invalidation, but such projects are unlikely to be successful in raising farm income for all products. Success could only be assured if the increase in total expenditure from a smaller quantity of domestic supply is greater than the administrative costs of the scheme plus the change in total amount paid by overseas buyers of the product concerned. Therefore, to increase total income paid to producers, price elasticity of Australian demand needs to be considerably less than unity and the external price elasticity of demand somewhat above unity. Or alternatively, in regard to the latter point, Australian export sales must be a small portion of the world trade in the product concerned (so export dumping will not cause an appreciable increase in world supply and depress the world market if overseas elasticity of demand is less than unity). The domestic price elasticity of demand is probably less than unity[4] (except for fresh fruit and some vegetables), but because overseas demand is likely to be of the same order, only rural products whose exports are a small portion of the world total could gain an expansion in total expenditure from this method.[5]

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[3] As home-consumption price is forced to a level above world parity, tariffs or import restriction are necessary to protect Australian producers against foreign competition.

[4] Some figures for the U.S.A. at the farm level are: Wheat 0·41, butter (consumer demand) 0·25, fruit (all fruit) 0·82, peaches 1·18 and apples 1·21, eggs 0·42, beef cattle 0·80. *Source*: Theodore Schultz: *The Economic Organization of Agriculture*. McGraw-Hill, 1953, pp. 189-191. It may be assumed that Australian elasticities are of the same order.

[5] Because Australia supplies around 50% of the world wool exports, any gain from a higher home price would be more than offset by a greater loss on the export market. As the Australian demand for individual fresh fruit products is probably considerably greater than unity, restriction of domestic market supply lowers real national and growers' incomes.

Since the necessary conditions outlined in the above paragraph have been fulfilled to varying degrees by wheat, butter and dried fruits in Australia, plans whose foundations lie in this technique have been used for these and other products. The Australian price has been raised either directly through a tax on current domestic consumption like the flour tax on wheat, or indirectly through a diversion of a more than normal volume into the export market as for fruit and wine by export bounties. In the former case, consumer price is effectively increased by means of the tax, while with the export subsidy method, domestic price rise results from the restricted Australian home supply.

On the other hand, with the direct payments method of price support, current market price varies according to uninhibited supply and demand shifts, and if the market price should fall below the supported level, the government makes up the difference with a cash payment to producers. This means that assistance to the grower does not cause domestic price to rise as with a home-consumption technique.

Since consumers pay the excess cost of a home-consumption price directly, the effect is much more severe on low income groups than if the payment were made from government income tax revenue (or deficit). Moreover, as real wages tend to be constant in Australia, increased consumer food costs raise the money price of labour. This will lower the effectiveness of assistance inasmuch as producers receiving the home-consumption price use labour as an input,[6] and will also contribute to the necessity for increased aid. All the same, farmers (and others, as we shall see in Part III) prefer the home-consumption price method for thereby it is less obvious that they are receiving any aid, and therefore it is more likely to be maintained if politically undesirable or factually unnecessary.[7]

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[6] Much more severe in periods of full employment, for—as we have seen in Chapter 6—comparative real labour rewards outside the rural industry influence farm real wages considerably more, and because home-trade industry passes on costs in these periods. This method will lower profit margins of alternative rural production not receiving the home-consumption price assistance. However, as we may assume large scale financial aid is only given when unemployment exists, this influence was overrated by the Giblin School.

[7] Some writers argue that the chief reason for desiring indirect support is that direct assistance makes the aided party appear as being "on the dole". This influence, although true, is of secondary importance. Actually, with the home-consumption price method recipients are just as much "on the dole", but in this case the fact is less apparent.

Although the home-consumption price technique increases the volume of exports, other competing nations tend to retaliate against this particular method of export expansion (particularly if the form is an export subsidy), and the effects may be detrimental to Australia's balance and terms of trade in the long run.

In Australia, national income is largely a function of export income, or in other words, the level of rural prices. If for some reason or other rural export prices drop severely, Australian export income will do likewise: this lowers the income of individual export producers, and with falling income, consumption and investment expenditures decline. If this decline is considerable, it may in turn lead to severe unemployment. On the other hand, if farm prices are maintained through direct government payments at levels high enough to keep Australian effective demand constant, there is no *economic* reason why employment levels should diminish.

Alternatively, with the application of a home-consumption price instead of the direct payment method, the opportunities for maintaining full employment are much less. Not only do consumers have less money to spend on other goods and services as the retail prices of essential food products rise (and they must rise if producers' money returns are constant with falling export prices), but the opportunity for the government to preserve the existing productive pattern of the economy and maintain general demand through deficit financing[8] is severely restricted. In fact, if the government were courageous enough, high employment levels could conceivably be maintained by the direct payments policy alone, if the fall in export prices were not too severe or permanent.[9] There would be no need to alter the composition of

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[8] Nowadays it is acknowledged by all (except the die-hards) that deficit financing is an acceptable means of sustaining effective demand and employment in depressed periods. The old cries of inflation are erroneous: inflation is too much money chasing too few goods. But with unemployment, as the productive capacity of the economy is not operating at peak levels, more money can chase more goods. For stable employment levels and constant money values, government policy should be orientated in the direction of budget deficits when employment levels are low, and, to ease inflationary pressure with full employment, budget surpluses should be used to drain money demand away.

[9] Such a policy would produce a severe strain on the balance of payments, but any policy which preserves full employment for long periods when export prices are low will do likewise. In the suggested policy, allowance

production away from the directions of greatest inherent profits and, in the long run, real national income would be maximized.

However, it should be noted that this method is only applicable to conditions in which recession in overseas countries lowers the price of Australian exports, and when, through the consequences of an extravagant protectionist policy, the profitability of naturally efficient rural production is dangerously reduced. If the price of any export, for example wool, should fall because of the invention of a cheaper satisfactory alternative, then artificially to maintain wool prices and production would be disastrous; for in this case and unlike the trade cycle effect, the price is permanently depressed. On such occasions the Australian advantage in producing the product is irreparably replaced by an alternative, and real national income is maximized by employing resources, previously used in producing the replaced product, in making other goods whose real productivities are then highest.[10]

We will return to a consideration of direct government supports in Chapter 12, but to establish that an over-all approach to the subject is necessary, we will turn to consider the effects of spasmodic price supports. Moreover, as the validity of government legislation in regard to marketing is inhibited by certain aspects of the Australian Constitution, it will be necessary to examine these difficulties from a legal point of view.

In Australia rural production has been subsidized in one form or another for three distinct reasons. Firstly, there is the non-economic motive: in this case only political and social aspects are of importance and rural products grown with assistance under this category include sugar, tobacco and cotton. As the social gain from the production of these products is considered, by and large, to outweigh the economic cost, it is irrelevant to consider this form of production from an economic angle. All the same, as products of this type are supported by other economically feasible

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should be made for a greater average propensity to consume imported goods through the extra demand which results from sustained rural incomes. If, with falling export prices, Australia is to avoid import restrictions (or their equivalent and the associated harmful effects) and at the same time maintain full employment, present policy must be aligned towards increased export output and greater international reserves.

10 Nevertheless, it would be essential to expect a fall in real national income when the price of any products, originally produced at comparative advantage, fell permanently; in this case real productivity in relation to resource employment is reduced.

activities, there must be a limit in absolute magnitude if a large fall in real national income is to be avoided.[11]

Secondly, as the price of some rural products may suffer acute variation with the trade cycle and, because of their importance in the economy, some aid is necessary in periods of international depression. Financial assistance to Australian wheat-growers is an important example of this type. Although it may, on occasions, be difficult to distinguish the second from the last type of assistance, in the third category is production that could be profitable under conditions of low protection, but which, through the consequences of a high induced cost structure, has become relatively unprofitable. Production using large amounts of labour and capital to land is within this category and includes the dairy, wine and poultry industries. For example, it may safely be stated that aid to dairy farmers has merely placated some of the "excess costs" which have fallen upon them.

Hence, we find in Australia rural production which always needs assistance; some needing occasional aid either through external price influences or changing internal costs; and at least one product, wool, which has never received price support. These factors, in combination with the political power of the section of rural society seeking aid, the philosophy of the government in office and the effects of any assistance on consumers' costs and votes in the next election, have made assistance to rural production a rather ragged spasmodic affair. As a result of all this and because of the lack of any worthwhile rural policy in Canberra, any relief to one particular type of farm product is unlikely to be extended to substitutable alternatives.

The available evidence suggests that with the granting of financial assistance to a particular activity, the profits from growing the product in question are usually increased to a level higher than any farm substitute crops or livestock;[12] and in time, an increase

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[11] This political-social production may have a detrimental effect upon alternative activities. For example, Australian canned fruits exporters were largely unable to compete with other exporting countries in the thirties because of the high domestic price of Australian sugar (an important cost factor in canning fruit).

[12] In some cases, as shown for instance with butter in recent years, the rate of subsidy is not high enough to alter the relative profits (obtained in producing alternative farm products) away from the original absolute scale. In this case the following considerations do not apply as this subsidy does not arrest a fall in production, but merely decelerates a trend movement. (Assuming, of course, that assistance was granted in the first place because

occurs in the output of the product concerned. Now under the home-consumption price technique, the same amount of assistance is then spread over a larger output; or in other words, the induced higher unit profits fall off. If the same unit profits are maintained, the burden of consumers' support increases as long as production expands. If there is, alternatively, a limit to the amount of aid, unit profits fall in proportion to production expansion and the industry remains depressed.

To overcome this dilemma, output restrictions have been imposed. They may be by "gentleman's agreements" as within the sugar industry, or by government decree as with the Wheat Stabilization Plan of 1940. All the same, the position of guaranteed prices accompanied by production restrictions demands careful study, for not only does the producer become a slave to the whims of the State or processing monopoly, but it may be an inefficient method of increasing farm income both from the national and the individual producers' point of view.[13]

The prime object of production control is to shift a portion of the national income to selected producers. But as this method does not give proper recognition to the distribution of productive efficiency within rural industry it lowers the real productivity of input employment. From a national angle it is, as a result, an inefficient method of achieving income redistribution.

As the absolute quantity of capital and labour inputs employed by farmers and graziers tends to be constant in the short period,[14] output of the controlled product may not decline in proportion to the decrease in area sown. (We will take wheat as an example. However, output restriction of other rural products acts in a similar manner.) Assuming that acreage control[15] is combined

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of relatively low profits and was not due to sectional political strength etc.) All the same, as the avowed aim of financial assistance is to sustain particular forms of production, these cases must be exceptions. Maintenance of relative production infers profits in the aided enterprise are brought to equality with alternatives; however, this is very difficult in practice.

13 Unless the financial assistance is to political-social production as outlined above: in this case a smaller output gives a greater real national income than a larger.

14 Especially, as we have seen, when there is unemployment. Furthermore, it is in periods when unemployment exists that large scale financial assistance to rural industry is essential.

15 Quota control is difficult with rural products (especially crops) owing to the effects of seasonal conditions upon output. Nevertheless, the net effects of quota controls are much the same.

with increased money prices, the farmer may maximize his income by increasing the use of capital and labour inputs on the restricted area to the point where the additional costs of resource employment approximate the increased returns from each acre. The degree to which output of wheat per acre would increase in these circumstances (seasonal conditions being constant) depends upon the amount of extra capital and labour used on each acre of the restricted area,—and the change in input use itself varies with the severity of the restrictions, the amount of the price increase, the type of farm and the level of employment.

If the farm were a single product wheat business or the grower a wheat share-farmer, it is probable that normal amounts of labour and capital resources would be used on the restricted area (particularly in periods of unemployment): should the farm produce several products, however, the movement of capital and labour away from wheat production would depend upon the relative profitability of alternative enterprises. If the farm were badly organized, as some Australian farms are, restrictions could increase farm wheat production. For example, if a farm that had previously followed continuous cropping were to fallow every second or third year (equals acreage reduction of a half and one-third), increased total output could probably be obtained with decreased land, labour and capital employment.[16]

Even if the restriction policy effectively lowers the quantity produced, as the farmer has fairly constant cereal productive resources (even in the medium to long periods except for fertilizer), acreage of uncontrolled crops such as oats and barley is likely to increase. Since the demand for oats and barley is extremely inelastic within the range of a profitable selling price in normal times,[17] the price of these products will decline sharply following output expansion. As a result, an increase in total farm income can occur only if the higher receipts from wheat outweigh the reduced receipts from growing the uncontrolled crops.

Even supposing it could be assumed that the increased revenue from wheat is greater than the reduction in receipts from the cereal alternatives, the absolute addition of income to the wheat industry as a whole can only be a portion of the total extra amount paid by Australian consumers. Thus when subsidies are paid in

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[16] See pp. 51-52.

[17] When the world shortage of feeding-stuffs, or more correctly, dollar shortage, does not produce an artificial overseas demand.

conjunction with production control, the increase in farm money income is less than if the subsidy were paid without production control.[18]

To overcome the difficulties associated with either the increased output resulting from financial assistance or the inefficiencies of restriction, there are two alternatives. Firstly, the price of the supported product may be fixed at a level just sufficient to keep the profitability from *producing* the aided product at the same level as other rural products which could be grown on the same land. In this case there is no profit motive to cause the balance of output between the assisted product and other products to change. The obstacle in such a scheme is the physical impossibility of establishing the correct price; for not only does the relative productivity of various products for each farm in the economy differ, but also, inasmuch as the money price of alternative rural products shifts, the relative profitability of the assisted industry changes.

However, the second alternative may largely solve the difficulty. As large scale price support for rural products is needed in Australia only when deep recession occurs,[19] if all rural products had a guaranteed price below which they could not fall in these periods, the government should be able to relieve the distress prevalent in badly depressed times without output restrictions. In a period covering a few years rural output as a whole does not alter much,[20] and if the production of a single product expands, this is motivated by a profit relatively greater than that obtainable

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18 The reduction of real national income may be greater when viewed in the long run. In Australia the policy of wheat production restriction had unfortunate results, for with a severe drought in 1945, stocks of home-produced feed-wheat were not sufficient to cope with the emergency, and large quantities were imported. Moreover, if production had not been restricted in the early periods of the war (the United Kingdom Government constantly advised against artificial restriction of production in these years) greater amounts would have been available to meet the acute hunger in the immediate post-war years and, with a general rise in world prices, the value of exports would have been considerably greater than it actually was. The danger of large surplus wheat stocks, and this is important as was found by the pre-depression Canadian pools, is that they cause wheat buyers to presume a future decline in prices, so current purchases are restricted and the very conditions, conceived as being possible, are precipitated.

19 Except for those rural products whose total costs (due to excessive protection) have made some form of assistance necessary, and for political-social production.

20 Any change results chiefly from the long-term relative profits in and out of rural industry (as a whole).

for the various alternatives, and therefore takes place at the expense of those products yielding a lesser net return. In other words, if the guaranteed prices were such that they approximated the probable long-term relative profits, the pattern of rural production would follow the same course. There would be no need to restrict production (except political-social types) and each farm would produce those products for which it had natural comparative advantage. No other scheme would yield as high a real national income in the long run.

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The Australian Constitution, like written constitutions in other countries, prescribes limits within which the Commonwealth may enact legislation; and functions of government not vested in the Federal Parliament at Canberra are delegated to the Parliaments of the six separate States. Although the Constitution restricts the growth of extreme legislative power in one central parliament, difficulties often arise when there is a division of political interest and legislative capacity between the Commonwealth and States. For instance, according to the Constitution, enactments such as those pertaining to the marketing of rural products are to varying degrees within the province of both Federal and State legislation; and as any legislation may affect the various States in different ways (for the product concerned may not be grown in all), bills concerning marketing are difficult to introduce, and even if introduced, are often short-lived through Constitutional invalidation.

Although an alteration of the Constitution is possible through a national referendum, these plebiscites have for the most part been without success, for: "Questions of constitutional power become inextricably confused with questions of legislative policy. Constitutional change becomes interwoven with party politics. Parties in opposition urge the rejection of amendments not easy to distinguish from some which they had themselves proposed when in office—and, of course, vice versa."[21] Hence, so that any of our suggestions shall be within the framework of the Constitution, we will examine those points which control and restrict rural marketing.

Although under Section 51: "The Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to—(i) Trade and commerce with other countries, and among the States:

[21] K. H. Bailey: "The Constitution and its Problems", in *Australia*, The United Nations Series, Cambridge University Press, 1947, p. 101.

(ii) Taxation; but so as not to discriminate between States or parts of States: (iii) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth: . . ." any Commonwealth legislation is restricted by two other clauses. In the first place, produce entering interstate trade had not been within Commonwealth jurisdiction, for section 92 of the Constitution reads . . . "Trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free. . . ." Secondly, all States should participate in a Commonwealth scheme if financial assistance is granted towards the growing of any product, and this is difficult if all States, as with many rural products, do not grow the product concerned. Section 99 controls this aspect and reads: "The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof."

Moreover, an individual State acting alone cannot readily increase the money income of its own producers by restricting the imports of similar products from other States or from overseas.[22] The Commonwealth is responsible for this regulation as section 112 reads: " . . . a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State; but the net produce of all charges so levied shall be for the use of the Commonwealth; and any such inspection laws may be annulled by the Parliament of the Commonwealth."

Since the Federal Government is inhibited by the Constitution in respect to national legislation for marketing rural products, the concurrence of all States is necessary for any home-consumption price policy to be workable. As complete agreement has been rare, however, attempts have been futile in many cases.[23] This

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22 But not always, for example: "It is believed that there is a very considerable amount of quarantine legislation on the statute books of the several States in Australia which was designed to operate, and does in fact operate, simply as a measure of State protection." (K. H. Bailey and L. F. Giblin: "Marketing and the Constitution", in *The Economic Record*, December, 1936, p. 156.)

23 The sugar industry may be cited as an interesting exception. This industry is regulated by the "voluntary organization of growers, millers and refiners, made solid and coherent by the structure and the circumstances of the industry". (Norman Cowper: "Organized Marketing under the Constitution" in *Marketing Australia's Primary Products*, Angus & Robertson, Sydney, 1937, p. 88.)

point can be appreciated when it is realized that there are seven separate Parliaments and a total of thirteen different Houses within the Commonwealth and the disagreement of one House may frustrate an entire scheme.

Legislation by all the States acting in association with the Commonwealth has the greatest opportunities for becoming law if two conditions are fulfilled. Firstly, as the home-consumption price technique is of greatest advantage to those States growing the product (and indeed, an obvious disadvantage to others), if the product concerned is grown in many or all the States the greater the chances for all State Parliaments to agree. Secondly, if the same party is in power in the Federal and State Parliaments, the atmosphere is more conducive to conformity, but as this rarely happens, party political difficulties have been the greatest encumbrance to success.

However, notwithstanding these marathon obstacles, marketing control under a system of uniform State enactments was introduced in the early twenties for marketing dried fruit. Each producing State fixed a uniform percentage of the crop to be sold on the export (lower-priced) market and growers were prohibited from selling a quantity in excess of the statutory quota on the home market. As section 92 guarantees freedom of interstate trade, growers were able to market their entire crop interstate to obtain the advantage of the higher Australian domestic price; and legal action was taken up by Mr F. A. James of South Australia in 1927 on this point. In the ensuing cases, both the High Court and the Privy Council decisions were in his favour. But, owing to a judgment in 1920 by the High Court,[24] it was held that section 92 bound only the States as the Commonwealth was given powers under section 51 to make laws in respect to interstate trade and commerce. As the James case proved the States impotent to act alone, in 1928, the dried fruits quota sales system was re-established to include Commonwealth law. This system (State control intrastate and Commonwealth control interstate) was extended in 1933 to include dairy produce and, in 1935, the wheat industry.

All the same, this state of affairs did not last long, for in 1936, the 1920 decision of the High Court was rejected when the Privy Council asserted that neither the Commonwealth nor the States may interfere with movements into or out of States. Although

[24] W. and A. McArthur Ltd. *v.* the State of Queensland (1920), 28 C.L.R. 530.

this judgment applied only to dried fruits, since wheat and dairy marketing were in similar positions, all the systems broke down.

In recent years, if there has been discrimination between export and domestic prices, the system has usually worked the other way round, for export prices have been higher than Australian prices. Therefore, the opportunity for an individual producer to gain the higher price for all his production is not one of selling on the Australian market (as with Mr James' system of selling interstate), but of selling all on the export market. Unfortunately for individual producers, there is little scope for them to circumvent any Commonwealth legislation in regard to export sales since in this case there is no attempt on the part of the Commonwealth directly to control home or interstate trade. Moreover, there is no Constitutional difficulty in establishing government export marketing boards through which all produce sold overseas must pass.

From this analysis it is apparent that any attempt by the Commonwealth to pay direct unit subsidies on the production of all rural products in certain periods would not infringe Constitutional considerations, and as domestic prices would not be at artificially high levels, the interstate sales difficulty would not arise.

Besides this important consideration, we have already noted that a direct payments method of support to rural production would help to maintain employment without distorting the productive capacity of the economy. In fact, as no other single policy can offer as much, we will return at a later stage to a discussion of a policy similar to our conclusions in this chapter.

PART III

Australia at the Cross Roads

CHAPTER 11

Introduction: The Story Repeated

In our considerations of government policy in Part II we observed how various devices raised the profits of manufacturing (import-competing) industry, and the manner in which any resulting expansion of protected production has taken place at the expense of export (or rural) output. Total Australian protection is nowadays very high, for it consists of the sum of any benefit obtained from devaluated currency, Imperial Preference, tariffs, import restrictions and the natural advantage that import-competing enterprise obtains through the vast distances separating Australia from other manufacturing nations. Owing to the high freight and insurance costs of a long sea voyage and inefficient wharf practices, the prices of heavy, bulky or valuable overseas commodities are considerably more in Australia than at the point of sale. (Of course this aspect operates in the opposite manner for exports and, in effect, means that import-competing enterprise has a double dose in this direction to improve its competitive position.)

Tariffs and import restrictions have raised product prices more than input costs in Australian manufacturing industry and have increased input costs without expanding product prices in the rural industry. In other words, we can say tariffs and import restrictions have not only raised the profits obtainable in protected manufacturing activities, but at the same time have lowered those of rural enterprise. As investment moves in the direction of greatest profits, this induced change in relative profits has led to a lesser amount of investment and production in the rural arena than there would otherwise have been.

Since devaluation and Imperial Preference have raised the profits of a portion of the rural industry, they have not been so severe in this direction. For instance, as we noticed in Part I, Imperial Preference has given a certain amount of gain to a few less important rural products, and the rural industry has, through this, received the appearance of benefit. But when we looked further in Part II we found on considering the rural industry as a whole that the situation was different; and besides, as the con-

sequences have acted in the opposite direction for manufacturing industry (that is, product prices rose more than input costs), the net effects of Imperial Preference on production have been similar to those of the tariff.

Now because devaluation has increased the price of rural products other than wool by as much as any increment available to manufacturing enterprise, and tended to restrict imports without reducing the volume of exports (at least in the short run), Australian effective demand and employment opportunities have expanded. But as we saw in Chapter 6, increasing levels of employment raise real labour costs to rural industry more than in other sections of the economy, and therefore devaluation in the early thirties raised costs to the rural industry most. This conclusion of a relative increase in profit margins to protected industry has been reinforced by another aspect: inasmuch as wool prices do not inflate in proportion to other prices with devaluation, profits in the rural industry (as a whole) have been lowered. Hence devaluation has also led to a movement of productive resources out of the rural industry. All the same, this is past history, and with conditions of full employment, devaluation will not cause rural labour costs to rise more than for manufacturing. Moreover, since the long-term future for wool is in doubt, the increase of non-wool rural production against wool (which results from devaluation), leads to the conclusion that this policy is a desirable and effective method of ensuring reasonable protection for manufacturing and high levels of labour employment.

Thus we see that all these different government policies have added up to restrict the growth of the rural industry: to draw Australian economic activity away from the region in which it is most efficient and towards producing alternatives whose value in relation to resources consumed is not as great as in rural industry.[1] In fact, if life on the land did not give some non-price advantages which are not obtainable in other pursuits, the volume of Australian rural output would be less than it actually is.

In this connection it is interesting to compare recent changes in rural production in Australia with those in other countries. The following table shows that Australian rural production (ex-

[1] If rural industry were without a natural advantage there would be no need for protection (except for infant industries); profits in manufacturing would be just as great as in rural pursuits and investment would occur in manufacturing without distorting the free-price mechanism.

cluding non-food) was in 1951/52 the same as in pre-war days, while in Canada, for example, output has increased nearly 50% and in the United Kingdom by about a quarter.

INDEX NUMBERS OF RURAL PRODUCTION—FOOD

Base: Pre-war = 100

Country	Pre-War	1948/49	1951/52
Australia	100	110	100
Argentina	100	113	104
Canada	100	126	145
New Zealand	100	105	107
United Kingdom	100	119	124
U.S.A.	100	142	132
Union of S. Africa	100	138	144

Source: F.A.O.

Although food production has fallen on many Australian farms through a substitution to wool growing (as a result of high wool prices), this move cannot explain the lapse in Australian food production since output has increased in other wool-growing countries like South Africa and New Zealand, and because Australian sheep numbers were below those of pre-war in 1948/49 and just above in 1951/52. The restriction of Australian food production against other countries can only be ascribed to excessive protection.

For instance, we found tariffs lowered the production of food more than the output of the rural industry considered as a whole. This we concluded happened because, since wool production does not use as much labour and capital to a given value of output as most other rural enterprise, the net effects have been a restriction of activities such as dairying and fruit growing and a tendency towards an expanded wool output.

This state of affairs has resulted from the impossibility of lowering land values in those rural activities using large amounts of capital and labour per acre sufficiently to allow production costs to remain constant. In extensive wool growing, land costs (rents or interest) are a greater portion of average total costs; and thus with a smaller fall in land prices, increased labour and capital costs are equalized and profitability maintained. Moreover, as wool growing gives an income not very much below the alternatives of dairying, pig farming, etc., in the better areas, and since

capital and labour costs are less, the income from wool growing in these areas has tended to come more and more into line with alternatives as the effects of tariffs have become more apparent. As a result, wool growing has expanded at the expense of other activities in better areas in recent decades (discounting wool price increases): hence tariffs have shown a tendency to work in the direction of raising the exports of wool and lowering those of other rural products. In fact, as Australians themselves consume the greater portion of all export production except wool, tariffs (and alternatives such as import restrictions) have led to a multiple decline in non-wool exports. In other words, if the present state of affairs continues, it will not be long before wool is the only export of importance.

It is interesting and, at the same time, frightening to realize that increasing Australian population is doing practically the same thing. As the Australian population grows, the export surplus from a constant volume of rural production becomes less and less. Because Australian consumption of wool is less than 10% of total domestic production, however, wool exports are affected much less than any other rural product by expanding population. In the following table are shown the increases in population required before Australia ceases to export and becomes an importer of various commodities. It should be noted that this table is constructed by assuming the output of the commodities concerned

PERCENTAGE INCREASES IN POPULATION BEFORE AUSTRALIA CEASES TO EXPORT VARIOUS COMMODITIES

Commodity	*Population Increase*
	per cent
Butter	42
All dairy produce (as milk)	35
Beef and veal	16
Mutton	8
Lamb	30
Pigmeats	17
Eggs (in terms of shell eggs)	20
Fresh fruit	22
Dried fruits	117
Wheat	270
Wool (3 years ending 1950/51)	1,400

Note: Exports are taken as the average for the 3 years ending 1951/52: Australian *per capita* consumption levels are those for 1951/52.

will remain constant,[2] but since the present state of affairs is conducive to a contraction of rural production, then unless government policy is changed we may conclude that any population expansion will not need to be so great to cause a cessation of exports. Moreover, as similar production changes due to seasonal conditions give greater fluctuations in actual exports as the margin exported falls, the volume of exports will be extremely irregular. Not only could this raise difficulties in obtaining assured markets and lead to lower prices, but at the same time the variations in export income will become increasingly greater.

Because the Australian protectionist policy and increasing population are working hand in hand in their effects upon the composition of exports, if the present policy is maintained, before long the only important export will be one product. Then all the eggs will be in one basket, and if wool prices should collapse, Australia will be unable to earn sufficient overseas currency to cover the food imports likely to be essential before long if *per capita* consumption is maintained. Imports would need to be restricted and this would make necessary the manufacture of all commodities within Australia, no matter what the real cost: Australia would be unable to float loans on international money markets as there would be no method of repayment.

This state of affairs is so frightening that it is difficult to comprehend the actual fall in real income and the misery which could result. But these are conditions of grave and acute danger, far more serious than at first sight and of a type which may well paralyse and cripple an expanding nation. For instance, if Australian exports were restricted to wool, and if it became necessary to import food to support a growing population (these are the present trends), then a collapse in wool prices would cause a cessation of both food and manufacturing imports. Many manufacturing imports are essential to the existence of the economy and difficult to do without, but as their real production costs are high in Australia, a large reduction of rural output would be necessary if they were produced domestically. If this state of affairs should eventuate, it would be impossible to have it both ways: either Australia would need to go without certain manufactured products which are indispensable in modern economy, or its people would need to go without food.

We may well inquire into the reason for this protection, and

[2] And also that *per capita* consumption will remain at 1951/52 levels.

the motive usually given is that it increases the volume of employment and manufacturing. However, as the level of employment and value of production in the rural arena declines through the effects of tariffs or import restrictions, the method is not very efficient. Not only does total employment increase less than factory employment,[3] but as the rural industries in Australia are the most efficient, any expansion in the value of manufacturing is offset by a fall in the value of rural production, and national income, in real terms, falls.

Moreover, as we observed in Chapter 8, in the long run imports are not restricted as much as exports after a tariff increase. This situation arises chiefly out of conditions within the export industry: although an increase in the value of manufacturing per head of population gives much the same reduction in the value of rural production, since a large portion of rural production is consumed locally, the decline in actual exports is a considerably greater percentage than any fall in rural output. We can express this in another way by saying the diversion of productive resources to manufacturing causes exports to fall more than imports; that balance of payments difficulties increase; that greater protection is needed to keep the payments balance in order,—in fact, that the whole thing is a vicious circle.

Fantastically enough, the long-term evils of tariffs (or other forms of import restrictions) do not end here. The need for an alternative policy is reinforced by a consideration of the future long-term trends in prices between various products. As a result of the recent acceleration in population growth in the western world (increasing population creates more jobs than it takes away), and the knowledge from the Keynesian economic revolution, it is unlikely that depressions—as severe as those experienced in the first half of this century—will occur again. This, coupled with technological advances and the gradual socialization of wealth, suggests the average real income of the world will rise. Now with increasing average real income and population, more manufactures and rural products are demanded. The real elasticity of supply for the former is relatively high as factories do not suffer

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[3] With high levels of unemployment an increase of employment in manufacturing may come entirely from the unemployed pool; however, there is, under these conditions, disguised unemployment in rural occupations, and if tariffs are effective (in giving full employment) there will be a decline in employment in rural occupations—or even, in a longer period, without reaching full employment levels.

from space restriction, and because greater output gives, in this section of the economy, increasing returns to scale. In rural enterprise the situation is different: expansion of rural production is difficult owing to the natural restrictions due to the constant physical volume of land, and because of decreasing returns from increasing resource employment on a given area.[4] This means that manufacturing will expand more than rural production and the price of the latter will rise in terms of the former. Therefore it is in the interests of maximizing Australian real national income that rural products should be grown to pay for imports of overseas manufactures.

Moreover, increasing world real income has different effects upon the price of various rural products. The price of commodities for which the income elasticity of demand is highest will expand most. We may expect the price of dairy, meat, poultry and other similar products to rise against wheat, for increasing real income in the western world creates a lesser demand for bread. Unfortunately the Australian tariff has restricted most severely the production and export of those food commodities for which the long-term future is brightest, and should Australian *per capita* real income rise, consumption habits will work in the same direction and the exports of these products would cease.

Therefore we may conclude that tariffs and import restrictions are not in the interests of the Australian nation and that, as import restrictions are the most vicious form of protection, this policy should be abandoned as soon as possible. Moreover, as the tariffs perform a similar evil, and in view of their cyclical nature, they too must be rejected.

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[4] If it were not for the technological improvements which have expanded returns from land in cultivation, world output of rural products would be much less and their price much higher. Technological advances have enabled world agricultural production to keep pace with population growth, and have taken the wind out of the Malthus Theory. However, it has a similar effect upon those who see the salvation of Australian rural industry in greater output through technological advances. As there is little monopoly control in the use of rural improvements, these advances lead to greater output and lower prices,—but see footnote, p. 76. This is not to say the recent partial eradication of rabbits in Australia will not increase national income; it will, but in this case Australia had a monopoly supply in a pest; eradication has only brought national income to levels at which it should have been before.

CHAPTER 12

The Best Road

It is fairly easy to determine that the balance of Australian production is not of the most desirable pattern: that manufacturing production is expanding on too wide a front and both the total volume of rural production and its composition are not quite what they should be. It is more difficult to find out why manufacturing in Australia is concerned with making a greater variety of goods than the present size of the consumer market will allow to be produced on a scale consistent with low cost production; and indeed, harder still to understand how total rural production and its composition have tended to lag behind the desired optimum. Nevertheless, we have developed what we consider to be a valid reason for the present state of affairs, and we have in the course of this evolution suggested certain encumbrances which should be removed.

Now we approach the real obstacle—how are we to allow Australian rural production to expand relative to other production, and at the same time, maintain international solvency and domestic full employment? Here is the rub: although only increased export production can guarantee both these conditions in the long period, in the process of achieving this goal, the situation may be quite another thing.

Let us examine this dilemma a little more specifically. In the last chapter we concluded, as import restrictions and tariffs do more harm than benefit to the Australian economy, that both must go. However, if they were removed suddenly (without offsetting action) not only would the volume of imports expand very rapidly to produce a balance of payments crisis, but many people employed in manufacturing in Australia would be thrown out of work. The export industry would be unable to absorb the resulting unemployment rapidly. Since an expansion of rural production demands considerable investment, an increase in the volume of exports to put the external balance in order and absorb some of the unemployment could not be achieved until several years after the tariffs and import restrictions were removed. Furthermore, much of the capital equipment needed for an expanded rural

production must be imported, so the effects on the balance of payments become exaggerated.

We should point out, however, that any unemployment which may result in manufacturing industry is likely to be structural or temporary and only a part of a necessary reorganization within the industry itself. It will be remembered from our discussion in Chapter 8 that input costs rise internally with tariff increases and lead to pressure for new tariffs. This cycle lowers the productive efficiency of proficient Australian industries and destroys opportunities for an export of manufactured goods. Therefore it is valid to expect the converse to be true and, in time, costs would decline if there were no tariffs and some manufacturing industries would become exporting. In other words, the long-term employment levels in manufacturing industry could be just as high as with tariffs.

Thus in consideration of the above points, although a reorientation of Australian economic policy would be beneficial to the whole nation, it appears as though our project must be one of making haste slowly. The undertaking must not be sluggish, nevertheless, for the present state of affairs in Australia does not allow the economy to resist a changed economic climate emanating from abroad. For instance, as both the volume of Australian exports and international reserves are below levels appropriate to meeting overseas payments in the face of an extended fall in export prices, if the latter should occur, some action to reduce the flow of imports would be imperative. Under these conditions, import restrictions would probably be necessary as they are most incisive in their effects. At the same time employment would fall off as the accumulated effects of a reduced demand from the export industry ramified throughout the economy. If government policy were aligned to maintaining full employment through public works and other relief measures, import restrictions would need to be particularly severe, for as we have seen, the average propensity to import is high with full employment. A harsh control over the volume of imports in association with a maintained effective demand would give disproportionately high profits in import-competing manufacture, and if an overseas recession were of the length and scale of the thirties, the ultimate effects, through the rapid transfer of productive resources to manufacturing, could well be the cessation of most exports other than wool. Not only would the countryside of Australia be bare, desolate and still, but the nation would—if wool prices collapsed—be a closed

economy: and that, from our analysis in the last chapter, is not only dangerous but could lower the Australian real national income most severely.

To enable the export industry to compete strenuously for productive factors we must conclude that, in association with an early removal of import restrictions and tariffs, a devaluation of Australian currency is imperative. This should be on a scale sufficient to raise the profits from rural production[1] while lowering those in the import-competing industry (as a whole). The latter point suggests the degree of devaluation should not be on a scale sufficient to offset the protective effects of the revoked tariffs and import restrictions. With an arrangement of higher relative profits in rural activities a long-term expansion of investment in the export industry should result, and the most inefficient import-competing enterprises would be forced out of business. This is, unfortunately, the price of salvation.

It will be recalled that wool prices should fall in terms of other rural products with a devaluation, but care—in consideration of the optimum degree of an alteration to the exchange rate—must be paid to the conditions of world wool supply and demand (both pure and synthetic). As we suggested on the last page of Chapter 2, a large reduction in foreign wool prices could lead —in conditions of excess world demand—to higher prices and profits in synthetic wool production. Nevertheless, a smaller fall in pure raw wool prices would increase its competitive position against synthetics and, in view of the long-term uncertainty surrounding this commodity, a relative expansion of non-wool rural products ought to prove efficacious.

As we have suggested, the ratio of depreciation should be such that the general protection to import-competing industry should be at a lesser level, and as a result a short-term strain in the balance of payments must be expected—for the real elasticity of supply is relatively low in rural areas.[2] Many imports could, however,

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[1] An associated increase in tax on the unimproved value of land would also have a beneficial influence on rural production. On established farms it helps to offset the undesirable consequences of increased income on production (backward rising supply curve) which may follow devaluation. As higher land taxes depress the sale price of virgin land, it eases the burden of land settlement for those with limited means. In other words, although it may appear otherwise to those who pioneer new areas, the net effect of a higher land tax is similar to a loan.

[2] This may entail progressive devaluations with reductions in tariffs: this, in turn, would entail strict control over external capital movements,

be financed by overseas borrowing and government projects essential to an expansion of rural output (e.g. transport facilities in Northern Australia) which are for specific purposes could be financed by the World Bank and similar credit sources.

At the same time, as competitive money product prices for efficient Australian manufacturing production are liable to contract more quickly than input costs in the shorter period, purchase tax should be reduced on this form of production. The Tariff Board could be reorganized to deal with this type of adjudication and also with suggesting the scale of bounty protection necessary to establish "infant industries", and that appropriate to existing industries where purchase tax is not applicable.[3] Bounty protection, as was shown concisely in 1929, has various advantages, namely:

"(i) The assistance given to a tariff-protected industry is, in fact, a bounty, but it is paid by consumers, and much of its cost falls ultimately on the export industries.
(ii) Bounties paid from tax revenues are paid by the general taxpayer, who can be taxed in proportion to his income and capacity, with much less hampering effect on production.
(iii) Bounties do not raise prices except through the general influence of taxation.
(iv) Bounties require payment only on the goods produced locally, while duties require payment on all goods consumed, through the customs duties collected on the imports which continue.
(v) With bounties it is easy to discriminate between the grades of goods which can be produced at home and those which cannot, and to leave the latter free from taxation.
(vi) The cost of bounties is definitely known and felt; it is not obscured as with duties, and there is a natural and healthy resistance to and criticism of the assistance given.
(vii) There is less probability of wasteful assistance to industries of minor importance."[4]

Although manufacturers resist bounty protection as it is obvious support, and governments, because it replaces customs revenue, it should be most beneficial to the economy; therefore this form

[3] Besides taking suitable action against "dumping" methods of competition.

[4] *The Australian Tariff An Economic Enquiry*, M.U.P., 1929, pp. 109 and 110.

of protection should be given to "infant industries"—but before any assistance is granted *onus probandi* should be on the applicant to show the industry has opportunities of decreasing costs to scale within the Australian market area.

As about one-eighth of Commonwealth revenue is supplied from customs receipts, and as the amount of government expenditure may well expand (in the form of bounties etc.), it would be necessary to increase other forms of taxation. Revenue could readily be tapped from increased excise (on intoxicants, cigarettes, etc.),[5] land tax, and from income tax: though with the latter, care is needed to ensure rates are not so severely progressive as to lower the marginal efficiency of effort. Of course, the most desirable tax level is that which increases marginal effort.

Taxation of farmers and graziers could also be changed so as to diminish the propensities towards a backward rising supply curve—which may well occur with devaluation and offset much of an increased volume of exports achieved through an expanded productive area. This method calls for a method of stabilizing producers' incomes through a varying income tax, and probably the best way of obtaining this is through an adjustable tax. For example, farmers should be able to purchase tax-saving certificates from the Taxation Department, and any portion of current income used for this purpose should not be taxed until the certificates are redeemed. At the time of redemption, the face value of the certificates plus any interest payable should be included with other current income and taxed accordingly. In association with progressive taxation, the averaging of income by purchasing tax-saving certificates when income is relatively high, and redeeming them when income is at a lesser level, could enable farmers to make a substantial tax saving. As a result, there would be a premium towards the accumulation of financial reserves in periods of higher than average income, and with redemption facilities, a form of insurance against lower than average returns. Besides mitigating periodic inflationary and deflationary pressures, such a policy would go a long way towards increasing the market period elasticity of rural supply, and through this, the unwanted effects of changing price on supply would be lessened.

If a recession in overseas countries generated a fall in the value of Australian export income, and through multiplying

[5] But not to a level sufficient to destroy *joie de vivre*, as is largely the case in the United Kingdom.

effects, severely reduced employment levels, one of the most effective methods of maintaining both employment and the long-term productive pattern would be through raising the incomes of those from whom the Australian deflationary pressure emanated. We have already concluded on the advantages associated with price supports in Chapter 10, and these could be introduced, for example, if the level of unemployment in Australia were more than 8% over a period of six months. The level of price support should not be rigid on a cost of production scale, and weight could be given in regard to the probable future terms of trade between the various rural commodities. The Bureau of Agricultural Economics should be entrusted with the responsibility of advice on this matter.

Naturally, a maintained internal effective demand in periods of low export prices increases the pressure on the balance of payments and inhibits the ease of maintaining employment levels. In fact, it makes continued high employment difficult to obtain no matter what methods are adopted for its continuance, and one of our principal reasons for wishing to build up the volume of exports and international reserves is to enable Australia to resist deflationary pressures from abroad. It is this factor that gives our thesis its sense of urgency.

For individual rural products little more need be stated, for most of our conclusions are apparent from the considerations in Part I and many of the harmful effects upon specific commodities, for instance dairy, would be mitigated if the policy we have suggested in this chapter were incorporated in the Australian economy.[6] Nevertheless, strenuous efforts should be made towards achieving lower wool tariffs in U.S.A. and, as a bargaining tool in attempts at a general lowering of world wool tariffs, it may be necessary for Australia to relax the ban on the export of merino rams. In any case, if domestic tariffs were abandoned Australia would be in an unassailable moral position to insist that other nations followed suit. At the same time, efforts could be made towards an expanded Australian trade in the Pacific and Indian Ocean areas, for not only are countries in this region close at hand, and such a policy conducive to good neighbourship, but with an increase in real income the demand for rural products

[6] As far as the Australian consumer is concerned, any increase in the "cost of living" through higher food prices should be completely offset by lower import and import-competing prices.

will expand most in this sphere. This affects wheat exports most particularly and then, to a lesser extent, meat, dairy and fruit products. Owing to the advantages resulting from long-term contracts with the United Kingdom (as outlined in Chapter 4), these should be clarified and extended where possible. Moreover, as the established form of Imperial Preference would be rendered ineffective through the abolition of Australian tariffs, and in view of the moral restrictions on the free convertibility of Australian London Funds (which are likely to continue), such an arrangement may lead to a continued—but not excessive—form of preference for British manufactured goods on the Australian market.

Finally, we must point out that the overseas value of Australian currency could be appreciated upwards with the resulting expansion of export production and international reserves combined with a conjoint fall in the domestic cost structure. Indeed, through a policy such as suggested in this chapter, as manufactured commodities as well as rural products may well be exports, it should be possible for Australia to have, in time, a freely convertible Australian Pound. In this way, a country which has such excellent opportunities would be able to realize them: in this manner the population of Australia could grow rapidly with an expanding income for all; with such a scheme Australia could become increasingly influential in the Pacific, and indeed, the whole world.

Appendix

APPENDIX

The Concept of Elasticity

THE concept of elasticity is simply an abbreviated and precise form of expressing market experience usually understood subconsciously. The price elasticity of demand, for example, shows the variation in quantity demanded following changes in price. The demand for some commodities such as salt and cigarettes does not alter much when the price changes, and goods of this type are said to have an inelastic demand (or that their elasticity is low, less than one or unity). Generally products having an inelastic price demand are either essentials, such as chairs or food (considered as a whole); habit-forming substances like cigarettes; or goods that are complementary to other production such as door-knobs for house building or raw wool for clothing manufacture. Products with an elastic price demand (or with a relatively high elasticity, greater than one or unity) tend to be those which can be more readily done without or substituted, and include such items as aeroplane trips and motor cars.

When the price elasticity of demand is elastic (i.e. above unity), a fall in price increases the demand sufficiently to give an expansion of total expenditure on the product concerned: that is, the amount which can be sold expands sufficiently to outweigh the loss in receipts through a lower price. With a rise in price for goods with an elastic demand the quantity demanded declines to a degree sufficient to give a smaller total consumer outlay. Alternatively, a rise in price of products with an inelastic demand (i.e. less than unity or one), such as bread, does not induce a sufficient restriction in the quantity demanded to give a lesser consumer outlay: in other words, for wares with a price elasticity of demand less than unity (i.e. inelastic), an increase in price expands total expenditure on the product concerned. With bread, matches and similar products, when the price falls, demand is so inelastic that the quantity which can be sold cannot expand sufficiently to make up the fall in price: that is to say, total consumer expenditure declines. If the price elasticity of demand for a product is unity (or equal to one), then a change in price induces a proportionate

variation in the quantity demanded—so the total consumer outlay remains constant with alterations in price.

The price elasticity of supply is similar to the above, but in this case, instead of measuring changes in demand to switches in price, the variations in supply are noted. If the supply of a particular product is inelastic (e.g. wool), an increase in price does not give a rapid alteration in the quantity produced; therefore demand changes are not cushioned very much and the price tends to rise more than if the supply were readily altered in the same direction as price shifts. If the price elasticity of supply is elastic, a rise in price may cause a large expansion in the quantity produced—so, in effect, the price does not vary so much. In general, manufactured goods tend to have an elastic supply, so price shifts (expressing changes in demand) are not particularly erratic, as movements in one direction are often offset. Rural products generally have an inelastic supply against price: hence when demand alters, prices are liable to change much more than for manufactured goods, since in this latter case demand switches are not smoothed out so well with supply changes in the same direction.

The income elasticity of demand is conceptionally similar to the price elasticity, but instead of measuring variations in the amount of a commodity or service demanded following price shifts, the change in quantity purchased with alterations in income is noted. If, as with woollen goods, the income elasticity of demand for a particular ware is elastic (above one or unity), a given increase in income evokes a relatively greater increase in its consumption; and alternatively, with a given fall in income, consumer expenditure declines in greater proportion. When the income elasticity of demand for a product is less than unity (i.e. inelastic), as with bread, changing income does not induce such a marked variation in the quantity demanded, for in this case, alterations in quantity consumed are not in ratio to income switches. As a result, when a particular commodity has an inelastic income demand, changes in income do not evoke such large fluctuations in demand as when the income elasticity is above unity.

The income elasticity of supply measures changes in output in relation to variations in producers' income. As producers' income changes directly with the selling price of the commodity or service sold, the concept is associated with the price elasticity of supply, but in this case the income effects are separated and noted. (For instance, as is apparent from Chapters 2 and 3, the price elasticity of supply of rural products tends to be low because of the physical

restrictions on rapidly changing output in farming activities: and due to the usual economic organization of farming into family farms, the income elasticity is also low.) For goods produced within small units in competition (e.g. farms), an alteration in income in the form of changing prices may induce switches in production in the opposite direction. In this case, as production results from the direct effort of a working proprietor, leisure may be substituted for work with rising income. Alternatively, with falling income through lower prices, it becomes necessary to increase output in attempts to maintain total receipts. In enterprise where expanding output does not directly affect the marginal effort of the proprietor, the income elasticity of supply works in the other direction: that is to say, output expands and contracts directly with changing income as expressed via prices. Hence, in the latter case, the income elasticity of supply is greater than in the former.

In statistical analysis the elasticities of demand and supply are expressed in figures. This allows precision. For instance, an elasticity of 1 (or unity) is taken as the neutral zone and any recording below 1 is inelastic, and any figure above 1 is elastic. Although 0·9 is inelastic, 0·3 is more severely so, and zero elasticity is the limit of inelasticity (the quantity demanded or supplied is not responsive to changes in price or income). Any recording above 1 denotes elastic supply or demand, and the higher the figure, the greater the elasticity.

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Figures in italics represent main study of the subject in question.